A STUDY TO ASSESS THE PROBLEM SOLVING ABILITY AMONG SCHOOL CHILDREN WITH ACTIVE AND NON ACTIVE PLAY IN SELECTED SCHOOL OF KOLLAM DISTRICT, KERALA.

BY

30083641

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN NURSING

MARCH – 2010

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CHAPTER – I

INTRODUCTION

"It is human to have a long childhood; it is civilized to have an even longer childhood. Long childhood makes a technical and mental virtuoso out of man, but it also leaves a life-long residue of emotional immaturity in him."

— Erik Homburger Erikson (1902-1994)

BACKGROUND OF THE STUDY

If someone asks you to pick the best years of the entire life span, you might choose the years from 7 to 11 and defend your choice persuasively. This life stage is often referred to as the "**Tween years".** We often view these years as a wonderful time of life.

As per the **child rights charter,** a universal definition of **"child"** includes all persons under the age of 18.

To begin with, physical development is usually smooth and unremarkable, making it easy to master dozens of new skills. With regard to cognitive development, most children aged 6-12 years are able to learn quickly and think logically, providing that the topic is not too abstract. Moral reasoning has reached that state where right seems clearly distinguished from wrong, with none of the ambiguities that complicate moral issues for adolescents and adults. The social world of middle childhood seems perfect. Most school-age children think their parents are helpful, their teachers are fair, and their friends are loyal. The future seems filled with promise at least most of the time it does. This is a critical time in the development of a positive sense of self. (Bee and Boyd 2004).

However, school and friendships are so important at this age that two common events can seem crushing: failure in school and rejection by peers. Some lucky children escape these problems; others have sufficient self-confidence or family support to weather them when they arise; and some leave middle childhood with painful memories, and feeling inadequate, incompetent, or inferior. Researchers have explored what most children can accomplish during the given school years. These charts are called developmental trackers.

For most children, the school years are a time of stable growth and notable improvement in physical skills. For some, unfortunately it is a time when certain types of disabilities become more pronounced in their consequences. During middle childhood, children grow more slowly than they did during infancy and toddler hood or than they will during adolescence. Increased strength and heart and lung capacity give children the endurance to improve their performance in skills such as swimming and running. Slower growth contributes to children's increasing bodily control. Children enjoy exercising their developing skills of coordination and balance. The specific skills they master depend largely on culture, gender, and inherited ability.

The ability of solving problems is one of the most important manifestations of human thinking. The range of problems people encounter is enormous. Life presents a never ending succession of problems to be solved and decisions to be made when faced with a problem; it would be well to remember that difficulties often stem from habitual ways of doing things. It is often our particular ways of looking at things and our ways of thinking that makes problem difficult. The intelligent solution of a problem seems to involve more than trial and error. Experience show that it often requires, a fresh insight based on a sudden shift, in the way the problem viewed. (Premavathi.V, 1993).

Therefore problem is an awareness of an individual of the impossibility to overcome difficulties and contradictions arising in a given situation by means of available knowledge and experience.

Problem solving has been described as a “Dynamic tension” between many seemingly opposing forces. Some of these include freedom- discipline (Parnes et al (1977); speculation-safe-keeping (Prince 1971); divergence and convergence (Farnham Digg, 1972); relaxation-alertness (Lozanon, 1978), feeling- thinking (William, 1970) and learning- problem solving (Kolb, 1976).

The effective problem solving model cycles through 8 steps as follows (1) Problem finding(anticipating future problems and seeking out current problems) (2) Fact finding (3) Problem defining (4) generating potential solutions (5) evaluating potential solutions (6) planning for action (7) gaining acceptance (8) taking action(Basadur et al 1990).

Play is a part of the child’s development as a social being. While being to the child, and perhaps to the parents, play is a diverting, pleasurable, almost haphazard activity; psychologists have long recognized its importance in socialization and cognitive development. **“**Play is defined as a co-operative interaction that has no stated goal, no end point and no winners: formal games in contrast are competitive interactions, aimed at achieving a recognized goal”. (Terry and Belkin 1989).

Play serves as a learning tool for children and their play changes with developmental needs. During the school years, children add realism to their play. Fantasy and reality are not mixed as they were during pre school years. Daydreams continue, but they become secret and are not shared with parents. The attention span increases as children have a deeper interest in what they are doing. Play becomes more formal, more organized, more competitive and to a degree less physically active. Hobbies are acquired as child develops an interest in collecting various things, which encourages acquiring facts and knowledge about the world.

As children participate in more organized sports, they gain experience in “learning the rules of the game” from parents and peers. Through play they learn self-government and self direction of activities.

NEED FOR THE STUDY

Identifying effective treatments for children who suffer from emotional and behavioral disorders is a growing concern in the United States. Increase in societal problems that directly impact children—including fragmented families, child abuse, youth violence, substance abuse, and media violence have placed additional demands on an already inadequate mental health system. Mental illness is now the leading cause of disability for all persons 5 years of age and older (U.S. Public Health Service, 2000).

The most recent U.S. Surgeon General's report on mental health described the shortage of appropriate services for children as a major health crisis and estimated that, although at least 1 in 10 of all children suffer from emotional and behavioral problems severe enough to impair normal functioning, less than half receive any treatment (U.S. Public Health Service, 2000).

Rutter (1995) stated that in India, the prevalence rate of psychiatric problem is 1 to 2 % and the behavioral disorders were 5-150 per 1000.

Kaufmam and Charney (2001) noted that 30% of children in out patient psychiatry treatment and 55% of children receiving inpatient psychiatry treatment have a history of child abuse. Patterson (2002) suggests that in The United Kingdom 1 in 5 children under the age of 6 have behavior that is disruptive to the family. The most current data in the United States suggests that about 10% of young children have problem behavior with that number increasing to 25% for children in poverty.

Child Death Review (2004) reported that 8, 72,000 children in the United States were victims of child abuse or neglect. Out of this number, 62.4% suffered neglect, 17.5% were emotionally or psychologically maltreated and 2.1% were medically neglected.

The children of India continue to be the most vulnerable section of the society and their growth and development remains a major concern. In India, the population of children below 18 is high as 41%. A large proportion of these children languish in the quagmire of apathy and alienation, suffering from worst forms of deprivation and abject poverty and are victims of various forms of exploitation and abuse. According to the 2001 census, India is estimated to have more than 400 million children below the age of 18; out of which 35 million children are in need of care and protection, (census of India 2001)

Erik Erikson who studied children's play in order to understand better, the child's developing sense of reality, argues that play is one of the major functions of the ego and its development. He noted that children's play is not the equivalent of adult's play-it is simply not recreation. Rather, Eriksons believes that through play the child is able to advance to new developmental stages and to deal with life experiences, which the child attempts to repeat, to master or to negate.

Play, he argues, involves self-teaching and self-healing, for in the play situation, the child can make up for frustrations and defeats in the real world. The child who fails at the task in the outer world can retreat into what Erikson calls the "safe island" that play provides and can overcome the feelings of failure within his or her own set of boundaries.

According to Freud, play helps the child master anxieties and conflicts. Because tensions are relieved in play, the child can cope up with life's problems. Play permits the child to work off excess physical energy and to release pent-up emotions, which increases the child's ability to cope with problems.

Piaget (1962) saw the play is both an activity constrained by a child's cognitive development and a medium that advances cognitive development. Play permits children to practice their competencies and skill in a relaxed, pleasurable way. Piaget believed that cognitive structures need to be exercised and play provides the perfect setting for this exercise.

Vygotsky (1962) also believed that play is an excellent setting for cognitive development. He was especially interested in the symbolic and make-believe aspects of play. He believes that parents should encourage such imaginary play because it advances the child's cognitive development, especially creative thought.

Daniel Berlyne (1960) described play as exciting and pleasurable in itself because it satisfies the exploratory drive each of us possesses. The drive involves curiosity and a desire for information about something new or unusual. Play is a means where by children can safely explore and seek out new information-something they might not otherwise do. Play encourages this exploratory behavior by offering children the possibilities of novelty, complexity, uncertainty, surprise and incongruity.

Faw and Belkin (1989) developed an elaborate classification of children's play. They are:

Unoccupied play: - The child may stand in one spot or perform random movements that do not seem to have a goal.

Solitary play: - Happens when the child plays alone and independently of others. The child seems engrossed in the activity and does not care much about anything else that is happening.

Onlooker play: - Takes place when the child watches other children play. The child may talk with other children and ask questions but does not enter into their play behavior.

Parallel play: - Occurs when the child plays separately from others but with toys like those the others are using or in a manner that mimics their play.

Associative play: - Involves social interaction with little or no organization. In this type of play, children seem to be more interested in each other than in the tasks they are performing.

Cooperative play: - Consist of social interaction in a group with a sense of group identity and organized activity. Cooperative play is the prototype for the games of middle childhood.

Barrett examined the effects of play therapy on the adjustment of socially and psychologically maladjusted children across six variables: personal adjustment, social adjustment, self-concept, school-related self-concept, inferred self-concept as rated by the parent and behavioral maturity as rated by the teacher. He found that a significant improvement was made by the children in the experimental group in the area of social adjustment.

Withee evaluated the process of play therapy in the following areas: patterns of play activity, nonverbal expression and verbal expression. A comparison of these areas between boys and girls was also made, as well as a comparing these areas in a treatment time of 15-weeks to an extended treatment timeframe. Certain verbal expressions, nonverbal expressions and play activities remained consistent across all sessions (e.g. sound effects, nonverbal checking with the counselor, dramatic and role play). He found differences in the play between boys and girls, such as boys exhibiting more anger, aggressive play, and sound effects than girls in play therapy. In general, girls tended to exhibit more creative and relationship play.

Play therapy is a developmentally responsive modality uniquely suited for children to help in preventing or resolving psychosocial difficulties and achieve optimal growth and development. The concrete objects (toys, art, etc) and other play based experiences provided in play therapy afford children an age-appropriate and emotionally safe means to express their difficult experiences. Play therapy is an effective intervention for a broad range of children's

problems across both behavioral and humanistic schools of thought, in various settings, across modalities, across age and gender. Training parents and involving them in their child's play therapy is highly effective and also has the potential benefit of preventing more severe and costly problems across the lifespan (Bratton et al 2000).

Erikson believes that the fourth psychosocial crisis is handled, for better or worse, during what he calls the "school age," presumably up to and possibly including some of junior high school. Here the child learns to master the more formal skills of life: (1) Relating with peers according to rules (2) Progressing from free play to play that may be elaborately structured by rules and may demand formal teamwork, such as baseball (3) Mastering social studies, reading, arithmetic. Homework is a necessity, and the need for self-discipline increases yearly. The child who, because of his successive and successful resolutions of earlier psychosocial crisis, is trusting, autonomous, and full of initiative will learn easily enough to be industrious. However, the mistrusting child will doubt the future. The shame and guilt filled child will experience defeat and inferiority.

From age six years to puberty, children begin to develop a sense of pride in their accomplishments. They initiate projects, see them through to completion, and feel good about what they have achieved. During this time, teachers play an increased role in the child's development. If children are encouraged and reinforced for their initiative, they begin to feel industrious and feel confident in their ability to achieve goals. If this initiative is not encouraged, if it is restricted by parents or teacher, then the child begins to feel inferior, doubting his own abilities and therefore may not reach his potential.

Children at this age (6-12years) are becoming more aware of themselves as individuals." They work hard at "being responsible, being good and doing it right." They are now more reasonable to share and cooperate.

Allen and Marotz (2003) also list some perceptual cognitive developmental traits specific for this age group. Children understand the concepts of space and time, in more logical, practical ways, beginning to grasp, gain better understanding of cause and effect and understand calendar time. At this stage, children are eager to learn and accomplish more complex skills: reading, writing and telling time. They also get to form moral values, recognize cultural and individual differences and are able to manage most of their personal need and grooming with minimal assistance. At this stage, children might express their independence by being disobedient, using back talk and being rebellious.

School children lead demanding, challenging lives. The developmental changes between the ages 10-12 are diverse and span all areas of growth and development. Physical, psychosocial, cognitive and moral skills are developed, expanded, refined and synchronized so that the individual may become an accepted and productive member of society. The environment, in which the individual develops skills also expands and diversifies. Instead of the boundaries of family and close friends, the environment now may include the school, community and church. Because of expectations for development, increasing skill and knowledge base and environmental expansion, the individual experiences new difficulties and dilemmas.

The middle childhood years are a fascinating period of time along the journey toward maturity. But this period had always remained as a neglected area of study, with most studies concentrating on the bewitching pre scholars or the baffing adolescents. The middle childhood period involves a number of stresses and consequent problems of adjustment because of tremendous amount of development taking place in all the emotional, social, cognitive and adjustment problems of a child is to made from a developmental frame work. The school and peer group experience, sex roles and the development of morality all become crucial during this stage and the maladjustment leads to feeling of inferiority, inadequacy, hopelessness and powerlessness. William and Stith (1980).

The problem of 10-12 year old children are related to social maturation, social issues, size, shyness, confusion, health, money, competition, burn out, self concept, parents, idols, fair play, drugs, sex, peer pressure and self criticism. Besides the developmental stresses, there are other stressful undesirable life events, which also place new demands and affect a child's adjustment.

As children grow, they begin to experience physical, intellectual, and emotional changes. The way they learn, feel, see the world, and relate to other people become different from when they were younger. These changes, along with demands from present-day society and peer pressure, create conflicts and tension in the adolescent, which are reflected in their behavior in school and at home. Young people at this age show a good number of contradictions and conflicts, which is normal. There is no "model" adolescent. All young persons are individuals with strong and weak points and with positive and negative qualities. (U.S.Department of Education)

STATEMENT OF THE PROBLEM

A study to assess the problem solving ability among school children with active and non active play in selected school of Kollam District, Kerala.

OBJECTIVES

1) To assess the problem solving ability among school children
2) To assess the active play among school children
3) To determine the association between problem solving ability and active play among school children
4) To determine the association between problem solving ability and selected factors among school children.
5) To determine the association between active play and selected factors among school children.

HYPOTHESES

H_1 : There will be a significant difference in the problem solving ability between school children with active and non active play.

H_2 : There will be a significant difference in active play among school children.

H_3 : There will be a significant correlation between problem solving ability and active play among school children.

H_4 : There will be a significant association between problem solving ability and selected factors among school children with active and non active play.

H_5 : There will be a significant association between active play and selected factors among school children.

OPERATIONAL DEFINITIONS

1) Problem Solving Ability (PSA): refers to the ability of the children to solve the problems in relation to certain areas like self concept, problems with the parents, problems with the teachers, problems with the peers, competition, self criticism, health, sexual maturation and shyness. It was measured by a structured questionnaire. PSA was measured in terms of PSA scores.

2) Play: refers to the activity of children related to play as measured by the items in the screening form. For the purpose of the study, children were classified as active and non active play children. Active play children refers to children with 6 or more scores characterized by playing indoor and outdoor games every day for more than 1 hour with his or her friends. Non active play children refers to children with less than 6 scores characterized by playing rarely indoor and outdoor games for less than 1 hour either alone or in a group.

3) School Children (SC): refer to the children attending the school between the age group of 10-12 years, who fulfill the selection criteria.

4) Selected Factors: refer to those issues of school children which were thought to influence the active play or problem solving ability such as age, sex, family income, type of family, location of family, number of siblings, occupation of parents, availability of parents, parenting by father, parenting by mother, academic performance and scholarship.

ASSUMPTIONS

- Items in the questionnaire would be adequate to assess the problem solving ability and active play among school children
- Children would respond honestly to the questionnaire employed for data collection.
- School children would have same PSA.
- Information provided by the students would closely reflect their problem solving ability and active play.

DELIMITATIONS

The study was delimited to

- Private school in Kollam District.
- Students who were present at the time of data collection.
- Data as measured by the structured questionnaire.

CONCEPTUAL FRAMEWORK

Conceptual framework is an organized phenomena which deals with concepts that are assembled by virtue of their relevance to a common theme. Conceptual schemes use concept as building blocks. Conceptual frame work can serve to guide research which will further support theory development. The conceptual models attempt to represent reality with its minimal use of words.

The present study was aimed at comparing the problem solving ability and play among school children. The conceptual framework was developed based on three main issues, background factors of school children, problem solving ability and play.

School children: In this study school children referred to children between 10-12 years of age studying in selected school at Kollam District and who were available during data collection. The following characteristics of school children were measured such as age, sex, family income, type of family, location of family, number of siblings, occupation of parents, availability of parents, parenting by father, parenting by mother, academic performance and scholarship.

Play: refers to the activity of children related to play as measured by the items in the screening form. For the purpose of the study, children were classified as active and non active play children. Active play children refers to children with 6 or more scores characterized by playing indoor and outdoor games every day for more than 1 hour with his or her friends. Non active play children refers to children with less than 6 scores characterized by playing rarely indoor and outdoor games for less than 1 hour either alone or in a group.

Problem solving ability: In this study problem solving ability referred to as the ability of children to solve the problems related to certain issues such as self concept, problems with the parents, teachers, peers, competition, self criticism, health, sexual maturation and shyness. Those children who scored favorable marks in problem solving ability questionnaire had good problem solving ability. Those children who scored unfavorable marks in problem solving ability questionnaire had poor problem solving ability.

The study aimed to compare and correlate active play and problem solving ability among school children.

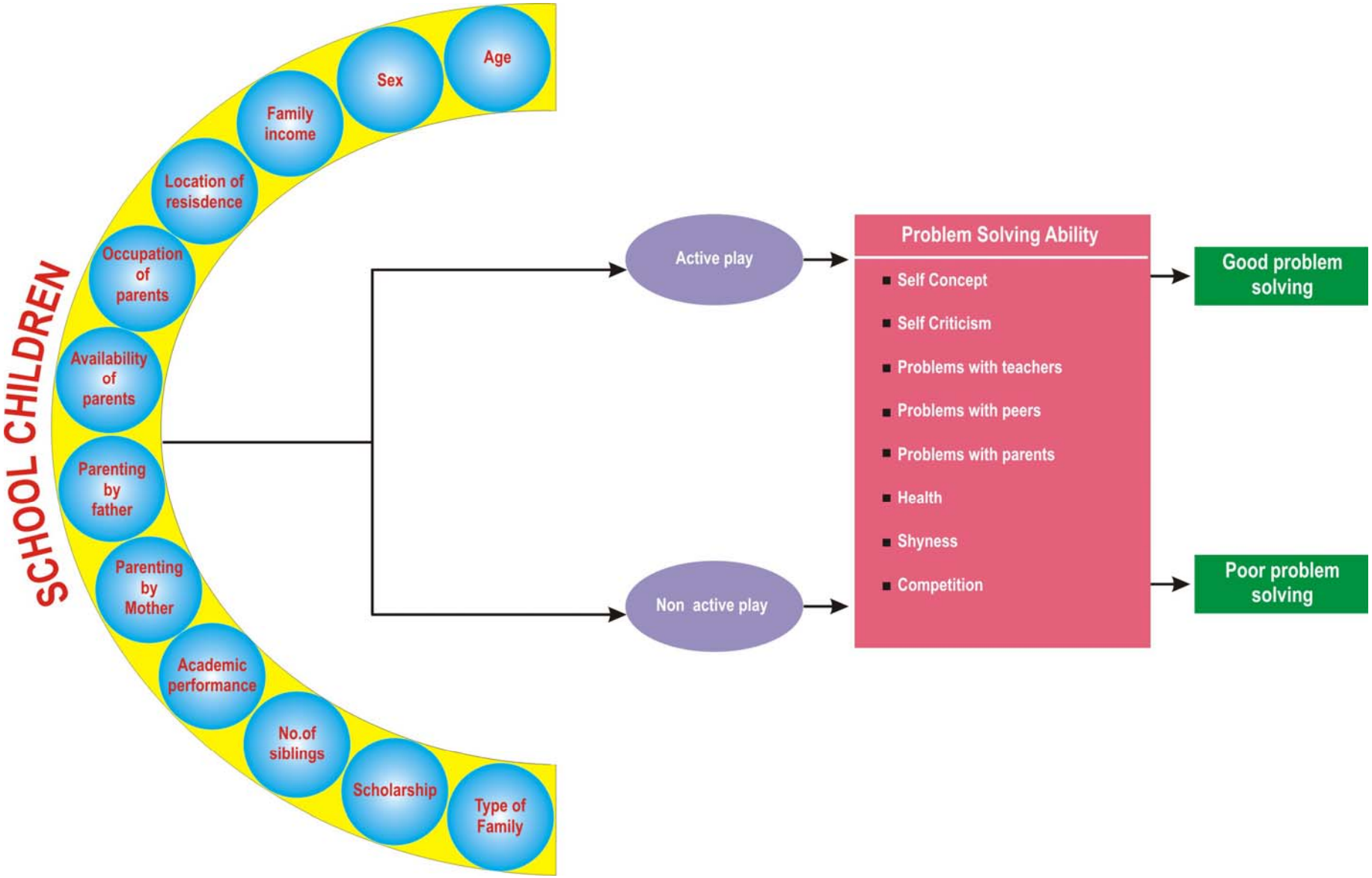


FIG-1: CONCEPTUAL FRAMEWORK

CHAPTER – II

REVIEW OF LITERATURE

A review of literature enables one to get an insight into the various aspects of the problems under the study. This involves the systematic, identification, location, and summary of written materials that contain information on a research problem.

Review of literature was organized under following headings:

I. Studies related to Problem Solving ability among school children.
II. Studies related to play among school children.
III. Studies related to problem solving and play among school children.

I. STUDIES RELATED TO PROBLEM SOLVING ABILITY AMONG SCHOOL CHILDREN.

Pandey.R.S. (2009) assessed the problem solving ability of children of non-formal education centers and formal primary school among 205 children of non formal education centre (NFE) and 105 formal primary school children (FPS) using the nine dot problem(NDP) . The nine dot problem was to connect all nine dots with 4 straight lines without retracing and without lifting the pencil from the paper. The NDP was a catalyst to help the educated persons to solve problems faced by them in real life. The study found that the performance of non-formal education children was found to be higher than those of formal primary children in terms of percentage.

Bhuyan (2009) reported the effects of intelligence and problem solving ability in examination performance of 366 higher secondary science students in Assam. The study revealed the performance of students in the examination at +2 level of science stream had considerable effects on future academic and professional career. Intelligence and problem solving ability were most important cognitive abilities required for learning science at secondary level of education. The results also showed that intelligence and problem solving ability had considerable effect on the performance of students in the examination at +2 level.

Salami, S.O (2004), studied the relationship between problem-solving ability and career maturity among 230 final year secondary school students in Ibadan, Oyo State, Nigeria, using completed self-report measures of problem solving and career maturity. Multiple regression analysis of the data showed that the three variables of problem solving ability such as personal control, approach-avoidance and confidence when combined effectively predicted career maturity among the students. Personal control made the highest contribution to the prediction. It was followed by approach-avoidance and confidence in that order.

Salami and Aremu (2002) examined the relationship between problem solving ability and study behavior of 430 (215 males and 215 females) senior secondary school students in South-Western Nigeria selected by stratified random sampling technique. The tools used were Problem- Solving Inventory PSI (Hepner 1988) and Adolescent Personal Data Inventory APDI (Akinboye, 1977). The responses of the students got from the two instruments were coded and the scores obtained were grouped into appropriate variables. The student's scores on PSI were the predictor variables while their study behavior scores from the ADPI served as the criterion on dependent variable. The data which was analyzed using Pearson correlation and multiple regression showed that the block of problem-solving ability subscales PSI total was significantly predictive of the study behavior (Beta=.95,t=2.26,p<.05).Problem solving ability was significantly predictive of study behavior of the secondary school children(F ratio was significant at the .05 level).

Suveendran.T (1992) assessed the effect of reinforcement on learning, creativity, problem solving and performance on intelligence test among 60 students (among 436 students of 7th,8th,9th) from a high school in Coimbatore city using the stratified random sampling technique(each class 20). In each class, the samples were divided into two groups equally by all respects, in which one was experimental and the other was control group. The Slot Maze (Call, 1921), Wallach and Kogan creativity scale (verbal scale, 1965), Passlong test (Alexander 1932) and pyramid puzzle (Seashore R.H.1938) were used for the study. The data analyzed using statistical technique like mean, SD, ANOVA shown that there was a significant effect of positive reinforcement on learning, creativity, problem solving, and performance on intelligence test.

Richard (1990) conducted a study to identify the individual differences related to the capacity to develop workable solutions for unstructured problem solving capabilities of student. It was found that individual difference, played a major role in the capability to develop workable solutions for unstructured problems and also training course was found to be effective to enhance the unstructured problem solving capabilities of students.

Kumar and Kumari (1988) investigated the difference in performance on two problem solving set (candle stick task and anagram task) in terms of high and low creativity group and extraversion –introversion of 48 university males and females meeting the requirement of 2x2x2 between group factorial designs. Performance in anagram task was assessed in terms of number of correct solutions in 10 minutes, where as in candle stick task, the index of performance was the time taken to solve the problem. The data analyzed using ANOVA showed that the high creative group and the introverts were superior to their respective counterparts. The F ratio in both cases were significant ($p<.01$). A significant creativity x personality interaction on analogram task revealed that high creativity boosted the performance of extraverted subjects, where as the introverts remained steady and superior under both conditions of creativity.

Parvathi.S and Rao (1978) conducted a study to assess the influence of needs, abilities, values on problem solving among 30 post graduate students of Madras university (15 male and 15 female) using problem solving test, social desirability, need for achievement and expectancy of academic achievement tests (mean age 20.5yrs, SD; 0.51). The results did not show sex difference on variables of problem solving, social desirability, need for achievement and expectancy of academic achievement. The study also found that there was a Positive relationship between problem solving and social desirability (p=.041). Investigations have clearly demonstrated the influence of needs, abilities, and values on positive problem solving. Effective thinking and reasoning, and learning in problem solving have been regarded as positive problem solving behavior.

Jacobson and Rotter (**1978**) conducted a research on need for social approval, social recognition and acceptance or social desirability on facilitating problem solving. The study found that the need for social approval, social recognition and acceptance or social desirability was found to facilitate problem solving. Achievement motivation was also found to be positively influencing problem solving ability. Problem solving was positively and significantly correlated with social desirability.

Peterson et al (1970) assessed the physical activity or motor responses associated with curiosity, persistence, and problem solving behaviors among 125 Elementary School Children. The children were voluntarily gone to a game room to play Piaget's billiard game. Each child was unexpectedly confronted with a scheduled delay during which time he was invited to wait in a waiting room where his behaviors were observed and analyzed by Multivariate and subsequent univariate analyses of variance. Results showed that curiosity increased with age and black children were more curious than non-black and no sex differences existed; problem solving ability increased with age, with boys being more successful ultimately than girls; and persistence appeared to be related to age but not to sex or race.

Maler.N.R.F, and Janzen, J C (1969) used four difficult objective type problems as a measure of problem solving ability and changing work procedure (CWP). Problem was used for the subjective measure. The integrative solutions were regarded as creative and superior. The results showed that subjects who reached the integrative solutions solved the objective problems more significantly which was evident in both university and junior college females.

II. STUDIES RELATED TO PLAY AMONG SCHOOL CHILDREN

Jackson et al (1999), examined the outcome of a 16-week play group therapy intervention for six highly stressed preschool-aged children compared to a preschool-aged control group. The focus of the group was to help the children build social skills, learn to express emotions appropriately, increase understanding of stress events, and learn new coping skills. The results indicated a significant increase in anxious and externalizing behaviors during the course of the intervention for the treatment group subjects compared to controls. Furthermore, group treatment subjects also indicated a significant increase in social skills during the group intervention. However, there were no significant differences on the psycho-social measure from pre-test to post-test. Despite the lack of differences on quantitative measures of children's functioning, parent report on a qualitative measure indicated improvement in children's psycho-social functioning at the end of treatment.

Burroughs et al (1997) conducted a study to compare pretreatment and posttreatment adjustment and knowledge of divorce for children assigned to one of two treatment conditions: a board game therapy that includes divorce information and coping skills training, and a conventional form of play therapy. Participants were 21 children, ages 7 to 17, whose parents have divorced within the last five years. Counselors were male and female doctoral students in counseling psychology at a University in the South-East. Data collection involved pretreatment and post treatment assessment using the Children's Depression Inventory (CDI; Kovacs, 1992), the Children's Beliefs About Parental Divorce Scale (CBAPDS; Kurdek *&* Berg, 1987),

the Child Behavior Checklist (CBCL; Achen-bach, 1991), the State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1970), the Piers-Harris Self-Concept Scale for Children (Piers & Harris, 1969) and the Children's Depression Inventory Parent Form (CDI-P; Kazdin, French, Unis & Esveldt-Dawson, 1983). Multivariate analyses revealed a significant pretreatment/posttreatment difference for the parent-report measures, $F(4,15) = 8.6$, $p < .002$, and a significant pretreatment/posttreatment difference on the STAIC subscales, $F(2,18) = 9.65$, $p < .002$. These significant pretreatment/posttreatment differences suggest better posttreatment adjustment.

Kaduson and Finnerty (1995) compared the effects of self-control training, using cognitive-behavioral game play (CB) and biofeedback game play (BF), on the behaviors of 58 male and 5 female 8–12 yr olds with Full Scale IQ of 90 or higher on the Wechsler Intelligence Scale for Children--Revised (WISC--R) and diagnosed with attention deficit hyperactivity disorder (ADHD). The experimental groups were compared to a control game group (GC), which received no self-control training. A 3 × 3 (treatment × time) factorial design with repeated measures, using IQ as a covariate, and multiple outcome criteria was employed comparing the groups. Findings supported the hypothesis that self-control training by BF reduces a child's perception of his or her self-control problems, but the same does not generalize to parental report of self-control or behavioral measures. Hyperactivity, one of the cardinal symptoms of ADHD, was significantly decreased in GC.

Cheyne (1983) analyzed to determine whether the specific skills evidenced in the combinatorial activity of play and/or the flexible set suggested by the use of fantasy were related to performance on a problem-solving task. 76 female and 64 male preschoolers (mean age 56 mo) were permitted to play for 8 min with a number of sticks of varying length as well as with a number of blocks. A subset of these materials was subsequently made available in a problem-solving session in which the solution could be achieved by joining sticks to create a tool to retrieve a lure. Significant correlations were found between (a) the discovery of the

solution principle and (b) the quality of combinatorial activity during play and problem-solving solution time. Nonsignificant correlations were found between all other play measures, including nonliteral object use and solution time.

III. STUDIES RELATED TO PROBLEM SOLVING AND PLAY AMONG SCHOOL CHILDREN

Jaeggi and Buschkuhl (2008) conducted an experimental study to determine that anyone can improve general problem solving by participating in unrelated mental exercises and puzzles. The team gave 35 volunteers a series of mental training exercises designed to improve their working memory, while they also had 35 more subjects who did not undergo the exercises. Those who underwent the tests were shown a sequence of squares appearing one after another on the computer screen every three seconds. The task was to decide whether a certain square was at the same position as another one previously seen in the sequence. At the same time, participants heard spoken letters and had to decide whether the currently heard letter was the same as one presented two or three steps earlier in the sequence. If a participant did well the tasks became harder, while if they performed poorly it became easier. This experiment went on for between 8 and 19 days, after which participants' problem solving ability was assessed and compared to the group who had not taken part in the exercises. The results showed that the group who took part in the puzzles had significantly improved their problem solving ability**.** This study provides the first evidence that mental exercise improves intelligence and general problem solving ability. Motivation appears to be an important factor in this exercise. Haphazard gaming will not produce the same effects as ambitious mind training.

Takakura et al (2006) examined whether subjective health complaints were associated with school-related stress and physical activity among 1,978 sixth grade school children at 25 public elementary schools throughout Okinawa, Japan. A self-administered questionnaire was administered. As a result of two-way analysis of variance, school-related

stress showed a significant main effect on health complaints among both boys and girls. However, physical activity did not show a main effect on health complaints among either boys or girls. There was also no observed interaction between school-related stress and physical activity on health complaints. Other health practices had significant main effects on health complaints in this age group. Pupils, who slept for 7-8 hours, ate breakfast everyday, watched TV for less than 4 hours a day or played video games for less than 4 hours a week were less likely to report health complaints. However, there was no observed interaction between school-related stress and each health practice on health complaints. This study suggested that physical activity in this age group has no direct or buffering effects on health outcomes.

Haskett (1990) compared the ability of physically abused children to resolve hypothetical social problems with the social problem-solving skills of a comparison group of non abused children. Analyses indicated that the abused children generated a more narrow range of solutions and were more likely to perseverate on negative solutions.

Pepler and Ross (1981) assessed the relationship between divergent problem-solving ability and the characteristics of children's play materials among 64 preschool children. The children's gave the opportunity to play repeatedly with convergent materials (e.g., puzzles with one correct solution) or divergent materials (e.g., blocks, which can be assembled in a variety of ways). Later, the children in the two groups were asked to solve a variety of problems, and their problem-solving approaches were examined. It was found that the children who had engaged in divergent object play were found to be more flexible and more original in their problem-solving approaches. The researchers concluded that the experience of working with puzzles or other toys that suggest a single correct way to play with them may teach children that there are correct answers and encourage them to seek them out. Playing with open-ended materials, on the other hand, may tell a child that numerous approaches can be taken to any problem and the possibilities for the use of one's creative imagination are limitless.

Sylva (1977) studied about convergent problem solving (the ability to bring a variety of isolated pieces of information together to come up with the one correct solution) among preschool children. The children were seated and told to attempt to obtain an object that was beyond their reach, without standing up or leaving their chairs. Two long sticks were provided, neither long enough to reach the desired object. However (and this was the only solution to the problem), if the sticks were clamped together, the children could attain their goal. The preschoolers were divided into three groups. The first were allowed to play freely with the problem-solving materials prior to engaging in the task. A second group watched as the experimenter solved the problem before they were asked to do it. Finally, a third group, the control, was given neither the play experience nor the opportunity to observe the problem being solved. It was found that the children who either played with the materials in advance or watched an adult solve the problem became more successful problem solvers than those in the control group. More interesting was the finding that the play group appeared to be more highly motivated to solve the problem and worked at it more persistently than did the observation group, whose members either solved the problem immediately or simply gave up.

Dansky and Silverman (1973, 1975), who assigned preschool children to one of three conditions (1) divergent play with novel materials, (2) imitative play, or (3) problem-solving experience, before testing all of them on a divergent problem-solving task. The researchers discovered that the children in the first condition performed better on the divergent problem-solving task, both when the same and different play materials were used.

CHAPTER – III

METHODOLOGY

Research methodology is a way to systematically solve the research problem. It is a science of studying how research is done scientifically. Methodology is a significant part of the research under which the researcher is able to project a blue print of the research undertaken.

This chapter deals with description of different steps, which were undertaken by the researcher, for the study. It includes research design, variables, settings, population, sample size, sampling technique, sampling criteria, description of tool, content validity, reliability, pilot study, data collection procedure, plan for data analysis and ethical consideration.

RESEARCH DESIGN

In the present study, the investigator intended to assess the problem solving ability and active play among school children.

The research design selected for the present study was descriptive in nature, to be precise, comparative and correlational design. The study was designed to gain more information of problem solving ability of school children in relation to their play. This study intended to assess the problem solving ability among active and non active play school children in selected school at Kollam District.

The schematic research design included population of the study, selection of the samples, settings, data collection techniques, data analysis and interpretation, variables of the study and criterion measures.

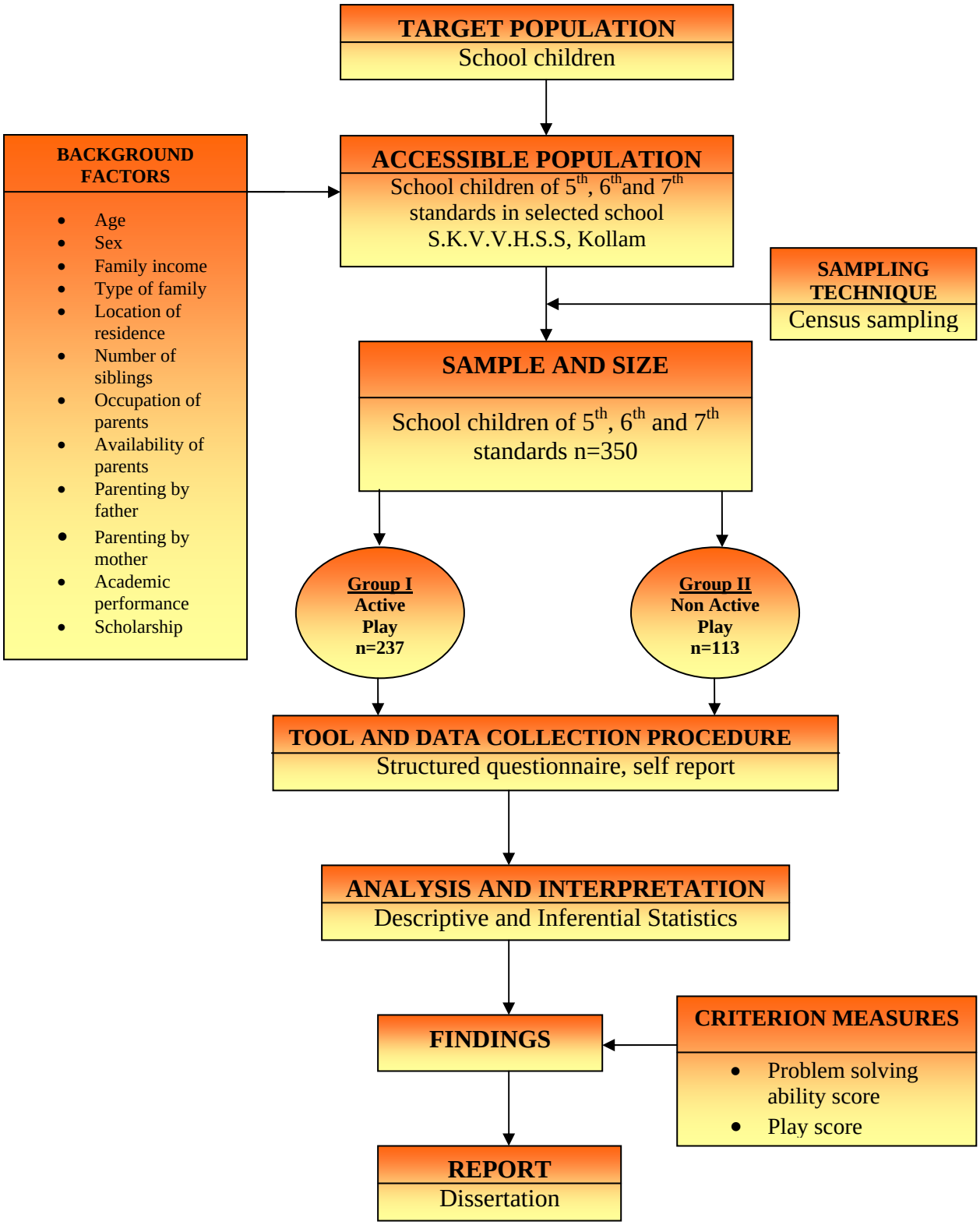


Fig. 2: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

VARIABLES

Variables are attributes that vary or differ among the persons or objects being studied. Variables used in the study were:

Dependent variables – Problem solving ability and active play.

Associate variables – refer to the background variables of school children such as, age, sex, monthly income, type of family, location of residence, number of siblings, occupation of parents, availability of parents, parenting by father, parenting by mother, academic performance and scholarship.

SETTING

The setting was selected based on acquaintance of investigator with geographical area, feasibility of conducting the study, availability of subjects and co-operation from authority. The study was conducted in a school namely, S.K.V.V.H.S.S, Thrikkannamangal, Kollam District.

POPULATION

Population may be of two types, target population and accessible population. Target population refers to the elements, people or objects to which the investigator wants to generalize the research findings. The target population of this study was school children.

Accessible population is the part of the target population that is available to the investigator. The accessible population in this study was school children, studying at S.K.V.V.H.S.S, Thrikkannamangal, Kollam District.

SAMPLE AND SAMPLE SIZE

A sample is a portion of the population that has been selected to represent the population. The samples of the present study were school children studying in 5th, 6th and 7th standards at S.K.V.V.H.S.S, Thrikkannamangal, Kollam District, who fulfilled the sampling criteria. The main purpose of the study was to obtain large enough sample to show statistical significance and being economical at the same time. The sample size included all the school children in the setting. Based on the screening, there were 237 active play children and 113 non active play children.

SAMPLING TECHNIQUE

Sampling is an important step in research process. Sample is a portion of the population to represent the entire population in order to obtain information, regarding a phenomenon in a way that represents the entire population. In this study total enumeration or census method or enumerative method was used to select the samples in the present study. All the children the fifth, sixth and seventh classes were included in the study.

SAMPLING CRITERIA

In sampling criteria the researcher specifies the characteristics of the population under the study by detailing the inclusion and exclusion criteria. Inclusion criteria are possessed to be included in the sample. Exclusion criteria are characteristics that the participant may posses that could confound the result of the study; therefore, they are excluded from participating the study.

Inclusion Criteria specified the school children

1. In the age group of 10-12years.
2. Who were available in the school at the time of data collection.
3. Who were willing to participate.
4. Who could read and write Malayalam.
5. Living with their parents.
6. With the play score of 6-10 in active play group.
7. With less than 6 score in non active play group.

Exclusion Criteria specified the school children

1. Who refused to participate in the study.
2. Who were physically handicapped.
3. Who were psychologically ill.

DESCRIPTION OF THE TOOL

The tool used in the study was a structured questionnaire to assess the problem solving ability and active play among the school children. It consisted of three sections.

Section A: Background Variables: This section sought information on background variables like age, sex, type of family, family income, location of residence, number of siblings, occupational status of parents, availability of parents, parenting by father, parenting by mother, academic performance and scholarship.

Section B: Screening Form: This section sought information on active play among school children. There were 4 items regarding the nature of play, type of play and duration of play. The maximum score was 10 and the minimum score was 1. Those who scored 6-10 belonged to active play group and scored less than 6 belonged to non active play group.

Section C: Data on Problem Solving Ability: This section sought information on ability of school children on problem solving in relation to certain areas like self concept, problems with parents, problems with teachers, problems with peers, competition, self criticism, health, sexual maturation and shyness. There were 20 items and the maximum score was 30. Those who scored maximum marks had good problem solving ability. Problem solving ability was increased in terms of problem solving ability scores.

CONTENT VALIDITY

The entire tool was validated by two nursing experts, one psychologist, one psychiatrist and one sociologist. The experts were requested to judge the items for their clarity, adequacy of content and simplicity. Appropriate modifications were made as suggested by experts in the background factors. The tool was translated into Malayalam. Then re-translated into English, thus language reliability was established.

RELIABILITY OF THE TOOL

The reliability of the tool was tested by test-retest method among 10 school children. Reliability co- efficient of the measuring tool r=0.92, was high.

PILOT STUDY

The pilot study is a small scale version on trial run of the major study. In order to find the feasibility of the study, a pilot study was conducted among 10 school children assessed the problem solving ability and active play behavior among the school children who had fulfilled the sampling criteria in the manner, with which the final study would be done. The setting was S.K.V.V.H.S.S school, Thrikkannamangal. The school children willingly participated in the study and shared relevant information without hesitation. Data were analyzed to find out the suitability

of the statistical method to be utilized in the main study. It was found that the study was feasible among school children. School children selected in pilot study were not included in the main study.

DATA COLLECTION PROCEDURE

Formal approval was obtained from the Principal of S.K.V.V.H.S.S; Thrikkannamangal. The data were collected for a period of 4 weeks from 1-10-09 to 30-10-09. All the school children who fulfilled sample selection criteria were included in the study. Using census sampling method, all the 350 students were recruited. Initial rapport was established and the purpose of the study was explained to them. Based on the screening form, children were classified as active play group and non active play group.

Confidentiality of the information shared was assured. After obtaining the informed consent, the self administered questionnaire was given to children. The students read questions carefully and marked their responses individually. The tool was checked for completion.

PLAN FOR DATA ANALYSIS

The data collected from the subjects were edited, analyzed by using both descriptive and inferential statistics on the basis of objectives, and the hypotheses of the study. The analysis was done using the statistical package SPSS version 10. The level of significance was 0.05.

a. Frequency and percentage were used to analyze the background factors.
b. 't' test was used to find out significant difference in problem solving ability between school children with active and non active play.

c. ‘t’ test was used to find out significant difference in active play among school children.
d. Correlation coefficient was used to find out the relationship between problem solving ability and active play among the school children.
e. Linear regression was used to find the association between background factors and problem solving ability among school children with active and non active play.
f. Linear regression was used to find the association between background factors and active play among school children

ETHICAL CONSIDERATION

- Research committee and ethical committee had approved for the area of the study.
- Prior permission was obtained from the Head of the institution.
- Purpose of the study was explained to the school children
- The school children had the right to withdraw from the study at any time.
- Confidentiality was ensured by the researcher.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

Polit and Hungler (2004), define analysis as the method of organizing data in such a way that the research question can be answered. Interpretation is the process of making sense of the result and of examining the implication of the finding within a broader content.

The analysis and interpretation of the data of this study was based on the data collected by structured questionnaire. The results were computed using descriptive and inferential statistics. The data were entered into the Microsoft excel and analyzed using SPSS.10 version. A probability of less than 0.05 was considered to be statistically significant.

OBJECTIVES OF THE STUDY

1. To assess the problem solving ability among school children.
2. To assess the active play among school children.
3. To determine the association between problem solving ability and active play among school children.
4. To determine the association between problem solving ability and the selected factors among school children with active and non active play.
5. To determine the association between active play and the selected factors among school children.

The data were collected, edited, tabulated, analyzed, interpreted and the findings presented in the form of tables under the following section

Section I : Data on background factors of school children.

Section II : Data on problem solving ability of school children.

Section III : Data on active play among school children.

Section IV : Data on association between problem solving ability and active play among school children.

Section V : Data on association between problem solving ability and selected factors among school children with active and non active play.

Section VI : Data on association between active play and selected factors among school children

SECTION – I : DATA ON BACKGROUND FACTORS OF SCHOOL CHILDREN

TABLE – 1

Frequency and percentage distribution of school children with active and non active play regarding background factors

Background factors	Active play n= 237		Non-active play n=113		χ^2 value
	No.	%	No.	%	
Age					
a) 10yrs	37	15.6	24	21.2	χ^2 = 2.496
b) 11yrs	97	40.9	38	32.7	p=.287
c) 12yrs	103	43.5	51	46.1	(NS)
Sex					
a) Male	148	62.4	60	53.1	χ^2 = 2.774
b) Female	89	37.6	53	46.9	p=.096
					(NS)
Family Income					
a) Above poverty line	136	57.4	55	48.7	χ^2 = 2.342
b) Below poverty line	101	42.6	58	51.3	p=.126
					(NS)
Occupation of parents					
a) Father only employed	132	55.7	55	48.7	
b) Mother only employed	19	8.0	14	12.4	χ^2 = 2.438
c) Both employed	79	33.3	40	35.4	p=.487
d) Both unemployed	7	3.0	4	3.5	(NS)
Availability of parents					
a) Both father and mother	227	95.8	110	97.3	
b) Father only	1	0.4	1	0.9	χ^2 = 1.307
c) Mother only	9	3.8	2	1.8	p=.520
d) None	0	0	0	0	(NS)

Table 1- reveals the background factors of school children such as age, sex, family income, occupation of parents and availability of parents.

Regarding **age**, majority 103(43.5%) of active play children were 12 yrs of age, and least 37 (15.6%) were 10 yr children. Majority 51(46.1%) of non active play children were 12 yrs and least 24 (21.2) were 10yrs children. The obtained Chi-square χ^2 = 2.496 (p= 0.287) was not significant. It was inferred that the active and non active play children were comparable regarding age.

Regarding **sex**, majority of active play children were males 148(62.4%) and the least were females 89(37.6%).Majority of non active play children were males 60(53.1%) and the least were females 53(46.9%). The obtained Chi-square χ^2 = 2.774(p=.096) was not significant. It was inferred that the active and non active play children were comparable regarding sex.

Regarding **monthly income**, majority 136(57.4%) of active play children were above poverty line, while 101(42.6%) were below poverty line. Majority 58(51.3%) of non active play children were below poverty line, while 55 (48.7%) were above poverty line. The obtained Chi-square χ^2 = 2.342(p=.126) was not significant. It was inferred that the active and non active play children were comparable regarding monthly income.

Regarding **occupation of parents**, majority 132(55.7%) of active play children had their father only employed and the least 7(3.0%) were children of unemployed parents. Majority 55(48.7%) of non active play children had their father only employed and least 4(3.5%) were children of unemployed parents. The obtained Chi-square χ^2 = 2.438(p=.487) was not significant. It was inferred that the active and non active play children were comparable regarding occupation of parents.

Regarding **availability of parents**, majority of active play children 227(95.8%) had both father and mother and least 1(.4%) of children were father only. Majority of non active play children 110(97.3%) had both father and mother and least 1(.9%) of children were father only. The obtained Chi-square χ^2 = 1.307(p=.520) was not significant. It was inferred that the active and non active play children were comparable regarding availability of parents.

It was inferred that majority of active play children were 12yrs of age, were males, were above poverty line, had their father only employed and both parents were alive. Also, majority of non active play children were 12yrs of age, were males, were below poverty line, had their father only employed and both parents were alive.

Figure 3: reveals the frequency and percentage distribution of active and non active play school children regarding type of family.

Regarding **type of family**, majority 147(62.0%) of active play children belonged to nuclear family and the least 27(11.4%) belonged to extended family. Majority 56(49.6%) of non active play children belonged to nuclear family and the least 10(8.8%) belonged to extended family. The obtained Chi-square χ^2 = 8.004(p=.018) was significant. It was inferred that the active and non active play children were not comparable regarding type of family.

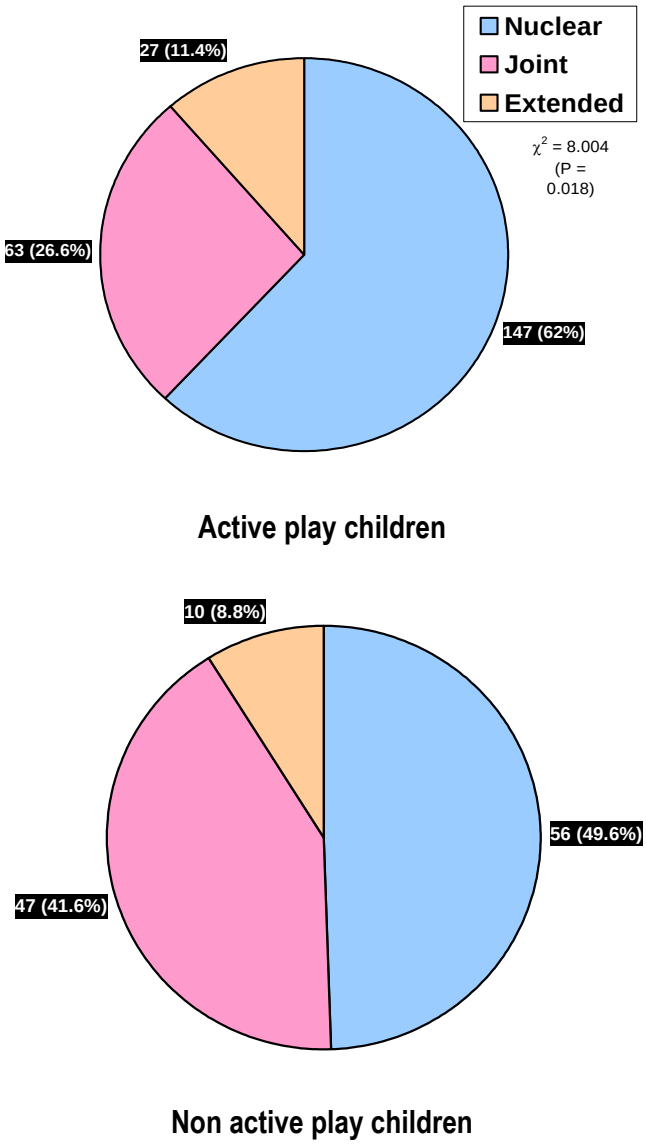


Fig. 3: Frequency and percentage distribution of active and non active play children regarding type of family

Figure 4: reveals the frequency and percentage distribution of active and non active play school children regarding location of residence.

Regarding **location of residence**, majority 207(87.3%) of active play children came from rural areas and least 30(12.7%) came from urban areas. Majority of non active play children 85(75.2%) came from rural areas and least 28(24.8%) came from urban areas. The obtained Chi-square $\chi^2 = 8.131$(p=.004) was significant.

It was inferred that the active and non active play children were not comparable regarding location of residence.

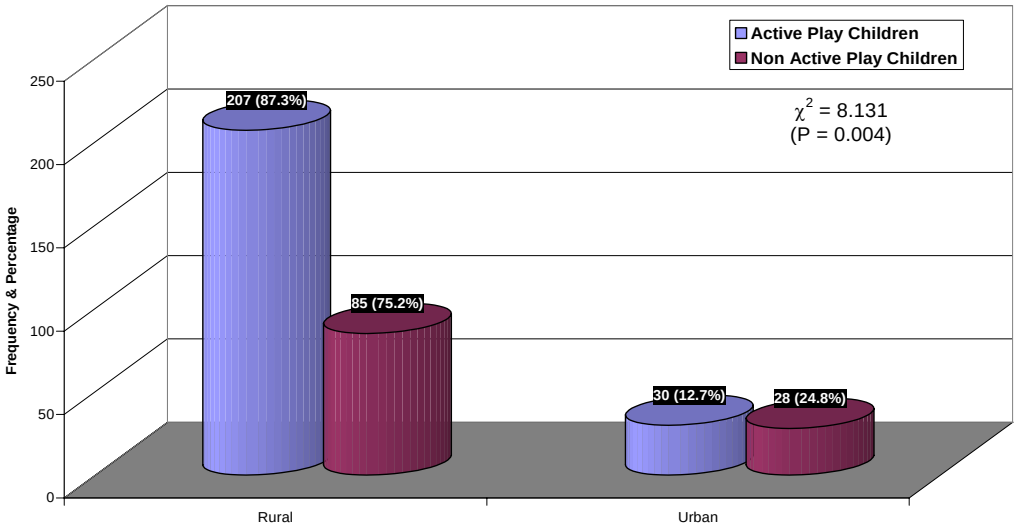


Fig. 4: Frequency and percentage distribution of active and non active play children regarding location of residence

Figure 5: reveals the frequency and percentage distribution of active and non active play school children regarding number of siblings.

With regard to **number of siblings**, majority 159(67.1%) of active play children had one siblings and least 22(9.3%) were single child. Majority 58(51.3%) of non active play children had one siblings and least 12(10.6%) had more than two siblings. The obtained Chi-square $\chi^2 = 9.662$(p=.022) was significant.

It was inferred that the active and non active play children were not comparable regarding number of siblings.

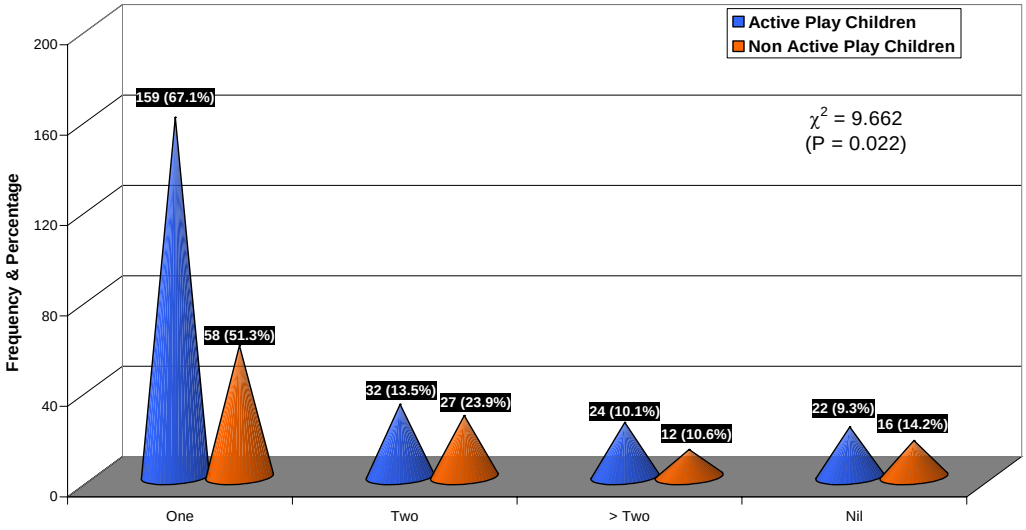
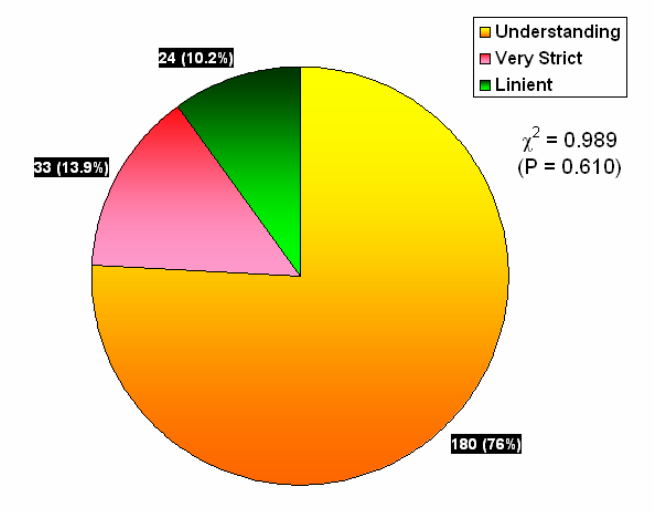


Fig. 5: Frequency and percentage distribution of active and non active play children regarding number of siblings.

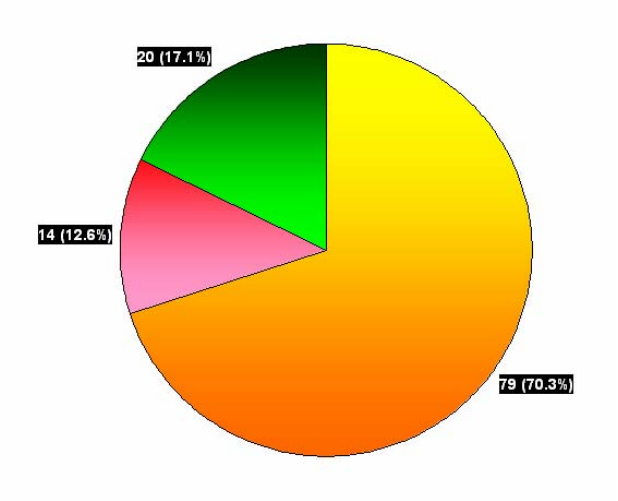
Figure 6: reveals the frequency and percentage distribution of active and non active play school children regarding parenting by father.

Regarding **parenting by father**, majority of father of active play children 180(73.4%) were of understanding nature, and least 24(10.1%) were linient. Majority of father 79(70.3%) of non active play children were of understanding nature and least 14(12.6%) were linient. The obtained Chi-square $\chi^2 = 0.989$(p=.610) was not significant.

It was inferred that the active and non active play children were comparable regarding parenting by father.



Active play children



Non active play children

Fig. 6: Frequency and percentage distribution of active and non active play children regarding parenting by father.

Figure 7: reveals the frequency and percentage distribution of active and non active play school children regarding parenting by mother.

Regarding **parenting by mother**, majority of mother of active play children 187(78.9%) were of understanding nature and least 15(6.3%) were very strict. Majority of mother 81(71.5%) of non active play children were of understanding nature and least 10(8.9%) were very strict. The obtained Chi-square χ^2=2.316(p=.314) was not significant.

It was inferred that the active and non active play children were comparable regarding parenting by mother.

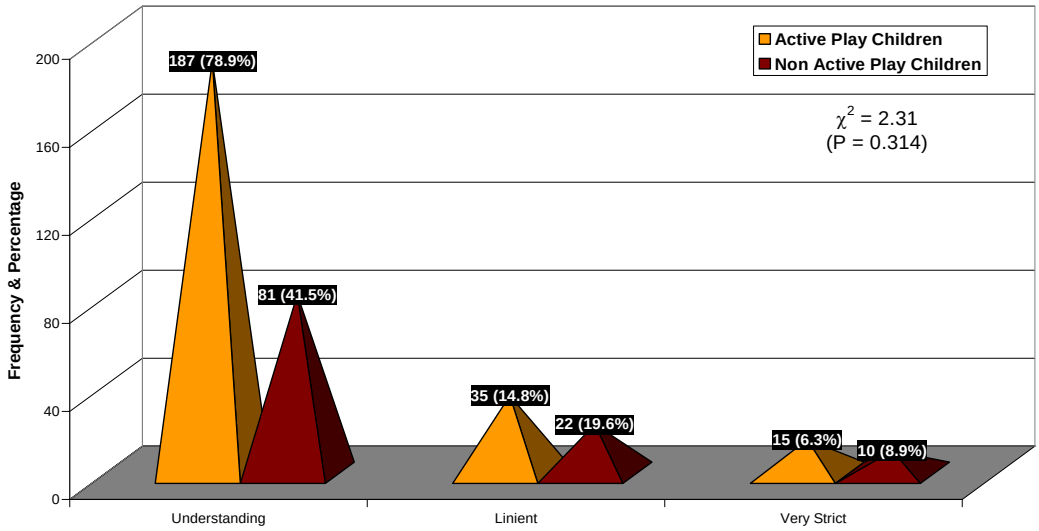


Fig. 7: Frequency and percentage distribution of active and non active play children regarding parenting by mother

Figure 8: reveals the frequency and percentage distribution of active and non active play school children regarding their academic performance.

With regard to **academic performance**, majority 134(56.5%) of active play children were within top 10 ranks and least 28(11.8%) were within last 10 ranks. Majority 59(52.2%) of non active play children were within top 10 ranks and least 22(19.5%) were within last 10 ranks. The obtained Chi-square $\chi^2 = 3.675$(p=.159) was not significant.

It was inferred that the active and non active play children were comparable regarding academic performance.

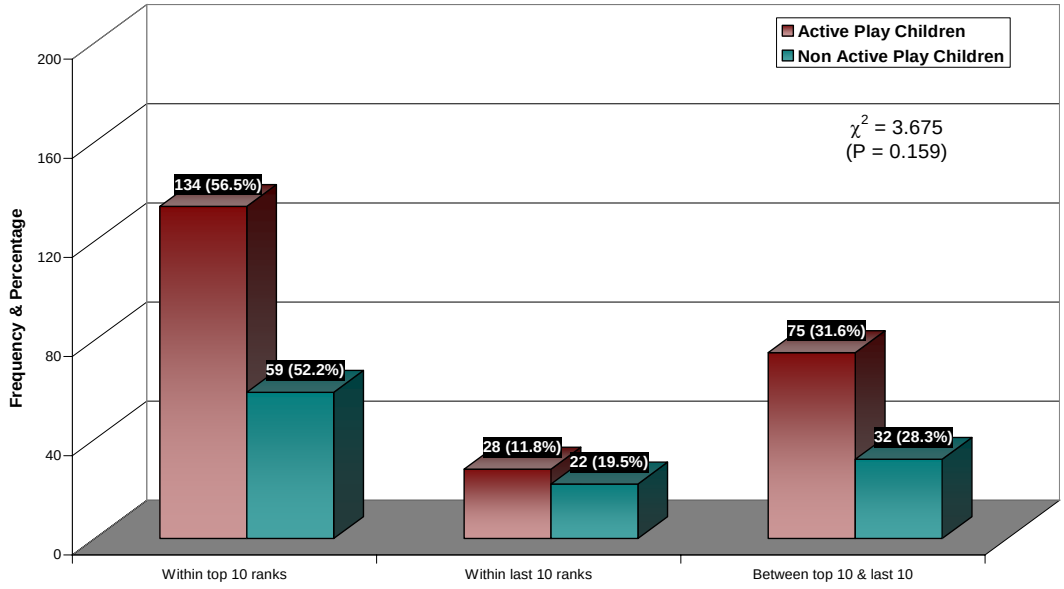


Fig. 8: Frequency and percentage distribution of active and non active play children regarding their academic performance.

Figure 9: reveals the frequency and percentage distribution of active and non active play school children regarding scholarship.

With regard to **scholarship**, majority 168(70.8%) of active play children were not getting scholarship and the least 69(29.2%) were getting scholarship. Majority 78(60.1%) of non active play children were not getting scholarship and the least 35(30.9%) were getting scholarship. The obtained Chi-square $\chi^2 = 0.127$(p=.722) was not significant.

It was inferred that the active and non active play children were comparable regarding scholarship.

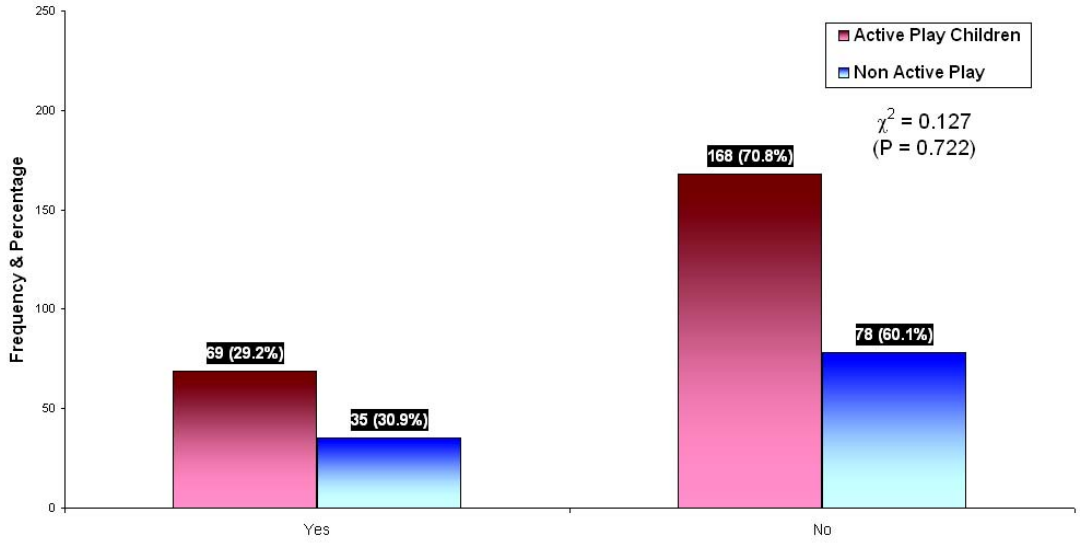


Fig. 9: Frequency and percentage distribution of active and non active play children regarding scholarship

SECTION II: DATA ON PROBLEM SOLVING ABILITY OF SCHOOL CHILDREN

For the purpose of the study, the following null hypothesis was stated

H_{01}: There will be no significant difference in the problem solving ability between school children with active and non active play.

TABLE – 2

Mean, SD, Range, Mean difference and 't' value of school children regarding their problem solving ability

School children	Max: score	Problem solving ability				
		Mean	SD	Range	Mean Difference	't' value
Active play n=237	30	23.27	3.39	8-28	2.22	4.826 P=.001 (S)
Non active play n=113	30	21.04	5.11	5-27		

Table-2 reveals mean, SD, range, mean difference and 't' value regarding problem solving ability among school children.

The mean problem solving ability among active play children Mean=23.27(SD=3.39) was higher than the mean problem solving ability of non active play children M=21.04(SD=5.11). The obtained mean difference was 2.22 and 't' value t=4.826(p=.001) was significant. Therefore, the null hypothesis H_{01} was rejected.

It was inferred that mean problem solving ability score among active play children was significantly high.

SECTION III: DATA ON ACTIVE PLAY AMONG SCHOOL CHILDREN

For the purpose of the study, the following null hypothesis was stated

H_{02} : There will be no significant difference in active play among school children.

TABLE – 3

Mean, SD, Range, Mean Difference and 't' value of school children regarding their active play

School children	Max: score	Play activity				
		Mean	SD	Range	Mean Difference	't' value
Active play n=237	10	8.11	1.03	7-10	3.12	25.261 P=.001 (S)
Non active play n=113	10	4.99	1.18	0-6		

Table-3 reveals mean, SD, range, mean difference and 't' value regarding active play among school children.

The mean play score among active play children Mean=8.11(SD=1.03), was higher than the mean play score of non active play children M=.4.99(SD=1.18). The obtained mean difference was 3.12 and 't' value t=25.261(p=.001) was significant. Therefore the null hypothesis H_{02} was rejected.

It was inferred that mean play score among active play school children was significantly high.

SECTION IV: DATA ON ASSOCIATION BETWEEN PROBLEM SOLVING ABILITY AND ACTIVE PLAY AMONG SCHOOL CHILDREN

For the purpose of the study, the following null hypothesis was stated

H_{03} : There will be no significant correlation between problem solving ability and active play among school children.

TABLE – 4

Mean, SD, and 'r' value regarding problem solving ability and active play among school children.

School children	Active play children n=237				Non active play children n=113			
	Mean	SD	'r' value	Signifi-cance	Mean	SD	'r' value	Signifi-cance
Problem solving	23.27	3.39	.118	.071 (NS)	21.04	5.11	.170	.072 (NS)
play	8.11	1.03			4.99	1.18		

Table- 4 shows the correlation between problem solving ability and active play among school children.

There was low positive correlation between problem solving ability and play among school children, among active play group r=.118(p>.05) and non active play group r=.170(p>.05). Therefore the null hypothesis H_{03} was accepted.

It was inferred that there was no correlation between problem solving ability and active play among school children.

SECTION V: DATA ON ASSOCIATION BETWEEN PROBLEM SOLVING ABILITY AND SELECTED FACTORS AMONG SCHOOL CHILDREN WITH ACTIVE AND NON ACTIVE PLAY

For the purpose of study, the following null hypothesis was stated:

H_{04} : There will be no significant association between problem solving ability and selected factors among school children with active and non active play

TABLE – 5

Linear regression regarding selected factors and problem solving ability among school children with active and non active play

(n = 350)

Background factors	Standardized coefficient (β)	't' value	Level of significance
Age	.193	3.835	.001(S)
Sex	.037	.741	.459(NS)
Monthly income	-.034	-.677	.499(NS)
Type of family	-.030	-.612	.541(NS)
Location of residence	-.256	-5.122	.001(S)
Number of siblings	-.154	-3.052	.002(S)
Occupation of parents	-.029	-.566	.572(NS)
Availability of parents	-.008	-.162	.871(NS)
Parenting by father	.103	1.762	.079(NS)
Parenting by mother	.038	.651	.516(NS)
Academic performance	-.133	-2.663	.008(S)
Scholarship	-.078	-1.601	.110(NS)

S- Significant ($p<0.05$); NS- Not significant ($p>0.05$)

Table -5 reveals linear regression regarding background factors and problem solving ability of school children.

The obtained 't' values regarding background factors such as sex t =.741(p=.459); monthly income t=-.677 (p=.499); type of family t =-.612 (p=.541); occupation of parents t = -0.566(p=.572); availability of parents t=-.162(p=.871); parenting by father t=1.762(p=.079); parenting by mother t=.651(p=.516) and scholarship t=-1.601(p=.110) and problem solving ability in the group were not significant (p>0.05). Therefore the null hypothesis was accepted.

However, the obtained 't' values regarding the age t=3.835(p=.001); location of residence t=-5.122(p=.001); number of siblings t=-3.052(p=.002) and academic performance t=-2.663(p=.008) were significantly associated (p<.05) with problem solving ability of school children. Therefore the null hypothesis H_{04} was rejected.

It was inferred that sex, location of residence, number of siblings and academic performance were independently associated with problem solving ability among school children.

SECTION VI: DATA ON ASSOCIATION BETWEEN ACTIVE PLAY AND SELECTED FACTORS AMONG SCHOOL CHILDREN

For the purpose of study, the following null hypothesis was stated:

H_{05} : There will be no significant association between active play and selected factors among school children.

TABLE – 5

Linear regression regarding selected factors and active play among school children

(n = 350)

Back ground factors	Standardized coefficient (β)	't' value	Level of significance
Age	-.001	-.021	.983(NS)
Sex	-.131	-2.371	.018(S)
Monthly income	-.066	-1.209	.227(NS)
Type of family	-.042	-.778	.437(NS)
Location of residence	-.176	-3.194	.002(S)
Number of siblings	-.107	-1.939	.053(NS)
Occupation of parents	.064	1.144	.253(NS)
Availability of parents	.033	.609	.543(NS)
Parenting by father	.017	.256	.798(NS)
Parenting by mother	-.009	-.145	.885(NS)
Academic performance	.031	.565	.572(NS)
Scholarship	.007	.121	.903(NS)

S- Significant (p<0.05); NS- Not significant (p>0.05)

Table -5 reveals linear regression regarding background factors and active play of school children

The obtained 't' values regarding background factors such as age t=-.021(p=.983); monthly income t=-1.209(p=.227); type of family t=-.778(p=.437); number of siblings t=-1.939(p=.053); occupation of parents t=1.144(p=.253); availability of parents t=.609(p=.543); parenting by father t=.256(p=.798); parenting by mother t=.-.145(p=.885); academic performance t=.565(p=.572) and scholarship t=.121(p=.903) and active play in the group were not significant (p>0.05). Therefore the null hypothesis was accepted.

However, the obtained 't' values regarding the sex t=-2.371(p=.018) and location of residence t=-3.194(p=.002) were significantly associated (p<.05) with active play of school children. Therefore the null hypothesis H_{05} was rejected.

It was inferred that sex and location of residence were independently associated with active play among school children.

CHAPTER – V

SUMMARY, FINDINGS, DISCUSSION, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

The essence of any research project lies in reporting and findings. This chapter is devoted to the consideration of the findings, understanding limitations, interpretation of the results and recommendations for further studies.

SUMMARY

The primary aim of the present study was to find the association between problem solving ability and active play among school children.

The objectives of the study were,

1. To assess the problem solving ability among school children
2. To assess the active play among school children
3. To determine the association between problem solving ability and active play among school children
4. To determine the association between problem solving ability and selected factors among school children with active and non active play.
5. To determine the association between active play and selected factors among school children.

The study attempted to examine the following research hypotheses,

H_1 : There will be a significant difference in the problem solving ability between school children with active and non active play.

H_2 : There will be a significant difference in active play among school children.

H_3 : There will be a significant correlation between problem solving ability and active play among school children.

H_4 : There will be a significant association between problem solving ability and selected factors among school children with active and non active play.

H_5 : There will be a significant association between active play and selected factors among school children.

The review of the related literature helped the investigator to develop the conceptual framework, tool, methodology and in the development of the tool. The review of literature was arranged as follows, 1) Studies related to problem solving ability among school children. 2) Studies related to play among school children.3) Studies related to problem solving ability and play among school children.

The investigator developed a conceptual framework based on his, own concept. The research design adopted for the study was descriptive in nature. After analyzing the research problem, the investigator selected comparative and correlational design. Setting chosen to conduct the study was S.K.V.V.H.S.S, Thrikkannamangal, Kollam District.

The dependent variables were problem solving ability and play. The associate variables of the study were age, sex, type of family, monthly income, location of residence, number of siblings, occupation of parents, availability of parents, parenting by father, parenting by mother, academic performance and scholarship.

A structured questionnaire was used for data collection. The content validity of the tool was obtained from 2 nursing experts, 1 psychologist, 1 sociologist and 1 doctor. The reliability of the tool was established by test-retest method. The reliability co-efficient was r=0.92, high.

The pilot study was conducted among 10 students from S.K.V.V.H.S.S, Kollam The tool was found to be reliable and feasible.

The data for the main study was collected for a period of 4 weeks. The study samples were selected by total enumeration or census sampling based on selection criteria. Totally 350 samples were selected. Informed consent was obtained after explaining the purpose of the study from school authorities. Data was collected using structured questionnaire. Data analysis and interpretation were done based on the objectives of the study using descriptive and inferential statistics. A probability of less than0.05 was considered as significant.

CHARACTERISTICS OF STUDY SAMPLES

Majority of active play children were 12yrs of age 103(43.5%), were males 148(62.4%), belonged to nuclear family 147(62.0%), were above poverty line 136(57.4%), came from rural areas 207(87.3%), had one sibling 159(67.1%), had their father only employed 132(55.7%), both parents were alive 227(95.8%), had father of understanding nature 180(73.4%), had mother of understanding nature 187(78.9%), were within top 10 ranks 134(56.5%) and were not getting scholarship 168(70.8%).

Majority of non active play children were 12yrs of age 51(46.1%), were males 60(53.1%), belonged to nuclear family 56(49.6%), were below poverty line 58(51.3%), came from rural areas 85(75.2%), had one sibling 58(51.3%), had their father only employed 55(48.7%), both parents were alive 110(97.3%), had father of understanding nature 79(70.3%), had mother of understanding nature 81(71.5%), were within top 10 ranks 59(52.2%) and were not getting scholarship 78(60.1%).

FINDINGS

The findings of the study were based on the objectives of the study.

Objective 1): To assess the problem solving ability among school children.

- The mean problem solving ability score among active play children was significantly high t=4.826,(p=.001)

Objective 2): To assess the active play among school children

- The mean play score among active play children was significantly high t=25.261,(p=.001)

Objective 3): To determine the association between problem solving ability and active play among school children

- There was no significant correlation between problem solving ability and active play among school children r=.118(p=071).
- There was no significant correlation between problem solving ability and non active play among school children r=.170(p=.072).

Objective 4): To determine the association between problem solving ability and selected factors among school children with active and non active play.

- There was significant association between problem solving ability and age t=3.835(p=.001); location of residence t=-5.122(p=.001); number of siblings t=-3.052(p=.002) and academic performance t= 2.663(p=.008).

- There was no significant association between problem solving ability and selected factors such as sex t=.741(p=.459), monthly income t=-.677(p=.499), type of family t=-.612(p=.541), occupation of parents t=-.566(p=.572), availability of parents t=-.162(p=.871), parenting by father t=1.762(p=.079), parenting by mother t=.651(p=.516) and scholarship t=-1.601(p=.110).

Objective 5): To determine the association between active play and selected factors among school children

- There was significant association between play activity and sex t=-2.371(p=.018); and location of residence t=-3.194(p=.002).
- There was no significant association between play activity and selected factors such as age t=-.021(p=.983), monthly income t=-1.209(p=.227), type of family t=-.778(p=.437), number of siblings t=-1.939(p=.053), occupation of parents t=1.144(p=.253), availability of parents t=.609(p=.543), parenting by father t=.256(p=.798), parenting by mother t=-.145(p=.885), academic performance t=.565(p=.572) and scholarship t=.121(p=.903).

DISCUSSION

Finding 1: Findings on problem solving ability of school children.

- The mean problem solving ability score among active play children was significantly high t=4.826,(p=.001)

The study findings were supported by the studies done by **Pandey.R.S (2009)** who assessed the problem solving ability of non-formal education centers and formal primary school children found that the performance of non-formal education children was found to be higher than those of formal primary children in terms of percentage.

Finding 2: Findings on active play among school children

- The mean play score among active play children was significantly high t=25.261,(p=.001)

Finding 3: Findings on correlation between problem solving ability and active play among school children.

- There was no significant correlation between problem solving ability and active play among school children r=.118(p=.071).
- There was no significant correlation between problem solving ability and non active play among school children r=.170(p=.072).

The study findings were supported by the studies done by **Jaeggi and Buschkuhl (2008)** showed that mental exercise improves intelligence and general problem solving ability, **Sylva (1977)** proved that children who either played with the materials in advance or watched an adult solve the problem became more successful problem solvers than those in control group. The play group appeared to be more highly motivated to solve the problem and worked it more persistently and **Pepler and Ross (1981)** showed playing with open-ended materials, may tell a child that numerous approaches can be taken to any problem and the possibilities for the use of one's creative imagination are limitless.

Finding 4: Findings on association between problem solving ability and selected factors among school children with active and non active play.

- There was significant association between problem solving ability and age t=3.835(p=.001); location of residence t=-5.122(p=.001); number of siblings t=-3.052(p=.002) and academic performance t= 2.663(p=.008).

- There was no significant association between problem solving ability and selected factors such as sex t=.741(p=.459), monthly income t=-.677(p=.499), type of family t=-.612(p=.541), occupation of parents t=-.566(p=.572), availability of parents t=-.162(p=.871), parenting by father t=1.762(p=.079), parenting by mother t=.651(p=.516) and scholarship t=-1.601(p=.110).

Finding 5: Findings on association between active play and selected factors among school children.

- There was significant association between play activity and sex t=-2.371(p=.018); and location of residence t=-3.194(p=.002).
- There was no significant association between play activity and selected factors such as age t=-.021(p=.983), monthly income t=-1.209(p=.227), type of family t=-.778(p=.437), number of siblings t=-1.939(p=.053), occupation of parents t=1.144(p=.253), availability of parents t=.609(p=.543), parenting by father t=.256(p=.798), parenting by mother t=-.145(p=.885), academic performance t=.565(p=.572) and scholarship t=.121(p=.903).

IMPLICATIONS

The study involves the following implications in nursing service.

Implications in Nursing Service

- ❖ Mean problem solving ability was high among children with active play. Therefore children must be encouraged to have active play.
- ❖ Location of residence was significantly associated with problem solving ability. Therefore child must be encouraged to live in natural settings than busy and demanding urban settings.

- There was a significant association between location of residence and active play among school children. Therefore children have more avenues to play in rural settings than urban settings.

LIMITATIONS

The limitations of the study were;

- Sample size requires increase in number
- The developed tool had inherent weakness beyond the control of the investigator.
- The groups were not comparable regarding type of family, location of residence and number of siblings.
- All students were above 10 years.

RECOMMENDATIONS

- A similar study can be replicated on a large sample size.
- Intervention study can be done.
- Study can be conducted among 6-12 years of school children.

CONCLUSION

Mean problem solving ability was high among children with active play. Children need to be encouraged foe active play.

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APPENDIX – I

LETTER SEEKING PERMISSION FOR CONTENT VALIDILY

From

30083641

II year Msc (Nursing),

Annai JKK Sampoorani Ammal College of Nursing,

Komarapalayam-638183, Namakkal distict.

To,

Through

The Dean,

Annai JKK Sampoorani Ammal College of Nursing,

Komarapalayam-638183.

Respected Madam/sir,

Sub: Letter consent for validating the tool

I am 30083641, II year Msc Nursing student of Annai J.K.K Sampoorani Ammal College of nursing, komarapalayam, under the Tamil Nadu Dr.M.G.R Medical University, Chennai.

As a partial fulfillment of Msc, Nursing programme, I am conducting "A Study to Assess the Problem Solving Ability among School Children with Active and Non Active Play in Selected School of Kollam District, Kerala".

Here with I am sending the tool for the content validity for your expert opinion. I humbly request yourself to spare a little of your valuable time for me for which I remain ever grateful to you. It would be very kind of you to return the same to the undersigned at the earliest.

Thanking you

Date: Yours sincerely,

Place: (30083641)

APPENDIX – II

CONTENT VALIDITY CERTIFICATE

I, hereby certify that I have validated the tool of 30083641, IInd year M Sc Nursing student of Annai J.K.K Sampoorani Ammal College of Nursing, Komarapalayam, who is undertaking the following study

"A Study to Assess the Problem Solving Ability among School Children with Active and Non Active Play in Selected School of Kollam District, Kerala".

Date: Signature of the Expert

APPENDIX – III

LIST OF EXPERTS

1. Mr.ARVIN BABU, M.Sc., (N),
   Principal,
   Dhanvantri College of Nursing,
   27, Poonkundranar Street,
   Karungalpalayam,
   Erode – 638 003.

2. Mrs. KAVIMANI, M.Sc (N)
   Principal
   SPM College of Nursing,
   Erode.

3. Dr.S.MUNIRAJU, MBBS., DPM.,
   Senior Civil Surgeon,
   Psychiatrist,
   Govt. Head Quarters Hospital,
   Erode.

4. Mr.N.SENTHILKUMAR,
   Clinical Psychiatrist,
   Govt. Head Quarters Hospital,
   Erode.

5. Mr. MURUGAN, M.Phil.
   HOD of Sociology Department
   ANBU College of Nursing
   Komarapalayam.

APPENDIX – IV

LETTER SEEKING PERMISSION TO CONDUCT RESEARCH STUDY

From

30083641

II year Msc (Nursing),

Annai JKK Sampoorani Ammal College of Nursing,

Komarapalayam-638183, Namakkal distict.

To

The Principal

S.K.V.V..H.S.S

Thrikkannamangal, Kollam

Through

The Dean,

Annai J. K .K. M. Sampoorani Ammal College of Nursing,

Komarapalayam- 638 183,

Namakkal District.

Sub: Seeking permission to conduct the research study.

Respected Sir/Madam

I am 30083641, II year Msc Nursing student of Annai J.K.K Sampoorani Ammal College of nursing, komarapalayam, under the Tamil Nadu Dr.M.G.R Medical University, Chennai.

As a partial fulfillment of university requirement for an award of Master of Science in Nursing Degree, I am conducting a research on the following topic. "A Study to Assess the Problem Solving Ability among School Children with Active and Non Active Play in Selected School of Kollam District, Kerala".

I would like to avail the students from your esteemed institution for my research study. Please grant permission for the same.

Thanking you

Place: Yours faithfully,

Date: (30083641)

APPENDIX – V

LETTER SEEKING PERMISSION TO CONDUCT RESEARCH STUDY

From,

30083641

II year Msc (Nursing),

Annai JKK Sampoorani Ammal College of Nursing,

Komarapalayam-638183, Namakkal distict.

To,

The Principal,
S.K.V.V.H.S.S.
Thrikkannamangal,
Kottarakara (Po).

Through

The Dean,
Annai J. K .K. M. Sampoorani Ammal College of Nursing,
Komarapalayam- 638 183,
Namakkal District.

DEAN
Annai J.K.K.Sampooran
Ammal College of Nursing
Komarapalayam - 638 183

Sub: Seeking permission to conduct the research study.

Respected Sir/Madam

I am **30083641** II year Msc Nursing student of Annai J.K.K Sampoorani Ammal College of nursing, komarapalayam, under the Tamil Nadu Dr.M.G.R Medical University, Chennai

As a partial fulfillment of university requirement for an award of Master of Science in Nursing Degree, I am conducting a research on the following topic. "A study to Assess the Problem Solving Ability of school children with active and non-active play in selected school of Kollam District, Kerala"

I would like to avail the students from your esteemed institution for my research study. Please grant permission for the same.

Thanking you

Place:

Date

Yours faithfully,
30083641

Permission granted.

S.K.V. VOCATIONAL HIGHER SECONDARY SCHOOL THRIKKANNAMANGAL KOTTARAKARA

K. THULASEEDHARAN NAIR
PRINCIPAL
S.K.V.V.H.S.S.
THRIKKANNAMANGAL
KOTTARAKARA - P.O.

APPENDIX-VI

QUESTIONNAIRE ON PROBLEM SOLVING ABILITY AMONG SCHOOL CHILDREN

Sl No:

SECTION -A: DEMOGRAPHIC VARIABLES

Instruction

This section contains questions regarding your background. Kindly tick (✓) mark the appropriate answer which best suits you. Please answer all questions

1) Age (in yrs)
   a) 10yrs ☐
   b) 11yrs ☐
   c) 12yrs ☐

2) Sex
   a) Male ☐
   b) Female ☐

3) Monthly income of family (RS……)
   a) Above poverty line ☐
   b) Below poverty line ☐

4) Type of family
   a) Nuclear ☐
   b) Joint ☐
   c) Extended ☐

5) Location of residence

a) Rural ☐

b) Urban ☐

6) Number of siblings

a) One ☐

b) Two ☐

c) More than two ☐

d) Nil ☐

7) Occupational status of parents

a) Only father employed ☐

b) Only mother employed ☐

c) Both employed ☐

d) Both unemployed ☐

8) State the availability of parents?

a) Both father and mother ☐

b) Only father ☐

c) Only mother ☐

d) No father or mother ☐

9) How do you rate the parenting by your father?

a) Very strict ☐

b) Understanding ☐

c) Linient ☐

10) How do you rate the parenting by your mother?

a) Very strict ☐

b) Understanding ☐

c) Linient ☐

11) State your academic performance?

a) Within top 10 ranks ☐

b) Within last 10 ranks ☐

c) Between the first and last 10 ranks ☐

12) Whether you are getting any scholarship?

a) Yes ☐

b) No ☐

SECTION-B: SCREENING FORM

1) Specify the type of games you play?
   a) Out door games only ☐
   b) In door games only ☐
   c) Both ☐

2) Size of the play mates?
   a) Group ☐
   b) Me and my friend ☐
   c) Alone ☐

3) How often do you play?
   a) Everyday ☐
   b) Few days in a week ☐
   c) Weekends ☐
   d) Rarely ☐

4) How many hours usually do you play?
   a) <I hr ☐
   b) 1-2 hours ☐
   c) >2 hours ☐
   d) No play ☐

Impression:

1) Active Play group (6-10 scores)

2) Non-active play group (<6 scores)

SECTION-C:

DATA ON MANAGING PROBLEMS AMONG SCHOOL CHILDREN

Instruction

The following items seek information about your actions or reactions in selected situations. There is no right or wrong response. Certain questions may have more than one appropriate response. Therefore choose the most fitting response(s) by placing a tick (✓) mark in the given boxes against each response. Please do not leave any question unanswered

1) When you do school work, how do you rate your work performance?

a) Some improvement needed ☐
b) Lots of improvement needed ☐
c) It is good, no improvement is required ☐

2) What do you do if your work/ performance/activity is not praised or acknowledged?

a) I do things in a better way for appraisal ☐
b) I don't do anything for appraisal sake ☐
c) I don't do anything where there is no appreciation ☐

3) When you are asked to perform in an open stage, what do you do?

a) I will participate without fear ☐
b) I will participate with fear ☐
c) I won't participate ☐

4) How do you do your homework?

a) I don't care about it ☐
b) I plan and do it ☐
c) when I get time, I try to do it ☐
d) Home work is a stress to me ☐

5) When you fail in a competition, what do you do?

a) I take it in the sportsman spirit ☐

b) I decide not to attempt anymore ☐

c) I feel inferior ☐

d) I won't bother ☐

6) What do you do when you are exhausted from your work/studies?

a) I relax myself with music/play/TV ☐

b) I sleep off ☐

c) I continue with other work ☐

7) How many role models (ideal persons) do you have in your life to imitate?

a) One ☐

b) Two ☐

c) More than two ☐

d) None ☐

8) How are you motivated to make decisions and activities?

a) By parents ☐

b) By teachers ☐

c) By friends/classmates ☐

d) By self ☐

e) By relatives ☐

9) How do you compare yourself with others?

a) I am better than others ☐

b) I am useless ☐

c) I am as good as others ☐

10) How do you handle the physical changes in your body?

a) It is natural, so I am not bothered much ☐

b) It is important, so I take advice and do accordingly ☐

c) It is problematic, so I am always try to overcome the problem ☐

11) How do you manage your physical size/growth?

a) I look big, I don't want to grow anymore ☐

b) My physical growth is appropriate to my age, I am happy ☐

c) I look small, I need to grow big ☐

12) How is your health status in general?

a) I am weak ☐

b) I am healthy ☐

c) I have resistance towards diseases ☐

13) If one of your playmates creates problem during play, what do you do?

a) He/she must be strictly punished ☐

b) He/she must be warned and left ☐

c) He/she should be forgiven ☐

14) If one of your classmates calls you by nick name, what do you do?

a) I will show anger ☐

b) I will call back by nick name ☐

c) I will cry ☐

d) I just don't care ☐

15) When your friend teases by relating your name with a boy/girl, how will you react?

a) I will quarrel with them ☐
b) I will complain to teacher/parents ☐
c) I will cry ☐
d) I won't care ☐

16) When strict discipline is prescribed by teacher/parent, what do you do?

a) I refuse to accept it ☐
b) I decide to do what is good for me ☐
c) I abide by it ☐

17) When parents give you correction for your fault, what do you do?

a) I will take their correction as good advice ☐
b) I won't bother about that ☐
c) I do what I feel as right ☐

18) When your parent compares you with others or criticizes, what do you do?

a) I show anger towards my parents ☐
b) I become jealous towards others ☐
c) I feel inferior ☐
d) I am motivated to do better ☐

19) If a group work or assignment is given in school, what do you do?

a) I happily work in a group ☐
b) I will work alone ☐
c) I suspect the work done by others ☐
d) I refuse any group work ☐

20) When you think your teacher shows partiality, what do you do?

a) I will take it easy ☐

b) I will cry ☐

c) I will take it as a challenge and study well ☐

d) I will openly say it to teacher ☐

APPENDIX – VII

സ്കൂൾ വിദ്യാർത്ഥികളുടെ പ്രശ്നപരിഹാര പാടവ ചോദ്യാവലി

ക്രമനമ്പർ : .....

ഭാഗം – 1 സമുദായ വിവരങ്ങൾ

നിർദ്ദേശം :- ഈ ഭാഗത്തിൽ താങ്കളുടെ സമുദായ വിവരത്തെക്കുറിച്ചുള്ള ചോദ്യങ്ങൾ അടങ്ങുന്നു. ദയവായി ഉചിതമായ ഉത്തരത്തിനുനേരെ ശരി (✓) ചിഹ്നം രേഖപ്പെടുത്തുക. ദയവായി എല്ലാ ചോദ്യങ്ങൾക്കും ഉത്തരം എഴുതുക.

1. വയസ്സ് (വർഷത്തിൽ)
   - എ) 10 ☐
   - ബി) 11 ☐
   - സി) 12 ☐

2. ലിംഗം
   - എ) ആൺ ☐
   - ബി) പെൺ ☐

3. കുടുംബത്തിന്റെ മാസവരുമാനം (രൂപ.....)
   - എ) ദാരിദ്രരേഖയ്ക്കു മുകളിൽ ☐
   - ബി) ദാരിദ്രരേഖയ്ക്കു താഴെ ☐

4. കുടുംബഘടന
   - എ) അണുകുടുംബം ☐
   - ബി) കൂട്ടുകുടുംബം ☐
   - സി) പാരമ്പര്യകുടുംബം ☐

5. താമസസ്ഥലം
   - എ) ഗ്രാമപ്രദേശം ☐
   - ബി) പട്ടണപ്രദേശം ☐

6. സഹോദരങ്ങളുടെ എണ്ണം
   - എ) ഒന്ന് ☐
   - ബി) രണ്ട് ☐
   - സി) രണ്ടിലധികം ☐
   - ഡി ഇല്ല ☐

7. മാതാപിതാക്കളുടെ തൊഴിൽനില

എ) പിതാവിനുമാത്രം തൊഴിൽ ☐

ബി) മാതാവിനുമാത്രം തൊഴിൽ ☐

സി) ഇരുപേർക്കും തൊഴിൽ ☐

ഡി) ഇരുപേർക്കും തൊഴിൽ ഇല്ല ☐

8. മാതാപിതാക്കളുടെ സാന്നിദ്ധ്യം

എ) മാതാവും, പിതാവും ☐

ബി) പിതാവ് മാത്രം ☐

സി) മാതാവ് മാത്രം ☐

ഡി) മാതാവും പിതാവും ഇല്ല. ☐

9. പിതാവിന്റെ രക്ഷകർത്തൃത്വം നിങ്ങളെങ്ങനെ വിലയിരുത്തുന്നു ?

എ) കഠിനനിഷ്ഠത ☐

ബി) മനസ്സിലാക്കുന്നത് ☐

സി) വിട്ടുവീഴ്ചാ മനോഭാവം ☐

10. മാതാവിന്റെ രക്ഷകർത്തൃത്വം നിങ്ങളെങ്ങനെ വിലയിരുത്തുന്നു ?

എ) കഠിനനിഷ്ഠത ☐

ബി) മനസ്സിലാക്കുന്നത് ☐

സി) വിട്ടുവീഴ്ചാ മനോഭാവം ☐

11. നിങ്ങളുടെ നിലവിലുള്ള അദ്ധ്യയനപ്രകടനം എങ്ങനെ ?

എ) ആദ്യത്തെ 10 സ്ഥാനത്തിനുള്ളിൽ ☐

ബി) അവസാനത്തെ 10 സ്ഥാനത്തിനുള്ളിൽ ☐

സി) ആദ്യത്തെ പത്തിനും, അവസാനത്തെ പത്തിനും ഇടയിൽ ☐

12. നിങ്ങൾക്ക് ഏതെങ്കിലും സ്കോളർഷിപ്പ് ലഭിക്കുന്നുണ്ടോ ?

എ) ഉണ്ട് ☐

ബി) ഇല്ല ☐

വേർതിരിയ്ക്കൽ ഫോറം

1. നിങ്ങൾ ഏതുതരം കളികളിലാണ് ഏർപ്പെടുന്നതെന്ന് വ്യക്തമാക്കുക ?

എ) വീടിനു പുറത്തുള്ള കളികൾ മാത്രം ☐

ബി) വീടിനു അകത്തുള്ള കളികൾ മാത്രം ☐

സി) രണ്ടും ☐

2. കളികൂട്ടുകാരുടെ വലിപ്പം ?

എ) കൂട്ടമായി ☐

ബി) ഞാനും എന്റെ കൂട്ടുകാരനും/കൂട്ടുകാരിയും ☐

സി) തനിയെ ☐

3. എപ്പോഴൊക്കെ നിങ്ങൾ കളിയ്ക്കും ?

എ) എല്ലാ ദിവസവും ☐

ബി) ആഴ്ചയിൽ ചില ദിവസങ്ങളിൽ മാത്രം ☐

സി) വാരാന്ത്യങ്ങളിൽ മാത്രം ☐

ഡി) വിരളമായി ☐

4. സാധാരണയായി എത്ര മണിക്കൂർ നിങ്ങൾ കളിയ്ക്കും ?

എ) ഒരു മണിക്കൂറിൽ താഴെ ☐

ബി) ഒന്നുമുതൽ രണ്ടു മണിക്കൂർ വരെ ☐

സി) രണ്ടു മണിക്കൂറിൽ കൂടുതൽ ☐

ഡി) കളിയ്ക്കാറില്ല ☐

ഭാഗം - 2 സ്കൂൾ വിദ്യാർത്ഥികളുടെ പ്രശ്ന പരിഹാരവിവരങ്ങൾ

നിർദ്ദേശം :- ചുവടെ കൊടുത്തിരിക്കുന്ന ഇനങ്ങൾ, ചില പ്രത്യേക സാഹചര്യങ്ങളിലുള്ള നിങ്ങളുടെ പ്രവൃത്തികളെയും, പ്രതികരണങ്ങളെയും കുറിച്ചുള്ള വിവരങ്ങൾ പ്രതിപാദിക്കുന്നു. ഈ പ്രതികരണങ്ങളിൽ ശരിയോ തെറ്റോ ഇല്ല. ചില ചോദ്യങ്ങൾക്ക് ഒന്നിൽ കൂടുതൽ അനുയോജ്യമായ ഉത്തരങ്ങൾ കാണും. അതുകൊണ്ട് ഏറ്റവും കൂടുതൽ അനുയോജ്യമായ ഉത്തരത്തിനുനേരെ കൊടുത്തിരിക്കുന്ന ചതുരത്തിനുനേരെ ശരി (✓) ചിഹ്നം രേഖപ്പെടുത്തുക. ദയവായി ഒരു ചോദ്യവും ഉത്തരം ചെയ്യാതെ വിടരുത്.

1. നിങ്ങൾ സ്കൂൾ ജോലി ചെയ്യുമ്പോൾ, നിങ്ങൾ, നിങ്ങളുടെ ജോലിയെ എങ്ങനെ വിലയിരുത്തും ?

   എ) കുറച്ചുനിലവാരം ഉയർത്തേണ്ടതായ ആവശ്യമുണ്ട് ☐
   ബി) വളരെയധികം നിലവാരം ഉയർത്തേണ്ടതായ ആവശ്യമുണ്ട് ☐
   സി) ഇതുനല്ലത്, നിലവാരം ഉയർത്തേണ്ട ആവശ്യമില്ല. ☐

2. നിങ്ങളുടെ ജോലി/പ്രകടനം/പ്രവൃത്തി എന്നിവ അംഗീകരിക്കുകയോ/അഭിനന്ദിക്കുകയോ ചെയ്തില്ലായെങ്കിൽ നിങ്ങൾ എന്തുചെയ്യും ?

   എ) ഞാൻ അഭിനന്ദനത്തിനുവേണ്ടി നല്ല രീതിയിൽ കാര്യങ്ങൾ ചെയ്യും ☐
   ബി) ഞാൻ അഭിനന്ദനത്തിനുവേണ്ടി മാത്രം ഒന്നും ചെയ്യുകയില്ല. ☐
   സി) അഭിനന്ദനം ഇല്ലാത്ത ഇടത്ത് ഞാൻ ഒന്നും ചെയ്യുകയില്ല. ☐

3. പൊതുവേദിയിൽ പ്രകടനം ചെയ്യാൻ ആവശ്യപ്പെട്ടാൽ നിങ്ങൾ എന്തുചെയ്യും ?

   എ) ഞാൻ ഭയമില്ലാതെ പങ്കെടുക്കും ☐
   ബി) ഞാൻ ഭയത്തോടുകൂടെ പങ്കെടുക്കും ☐
   സി) ഞാൻ പങ്കെടുക്കുകയില്ല ☐

4. നിങ്ങളുടെ ഗൃഹപാഠങ്ങൾ എങ്ങനെ ചെയ്യും ?

   എ) ഞാൻ ചെയ്യാൻ ശ്രദ്ധിക്കാറില്ല ☐
   ബി) ഞാൻ ആസൂത്രണം ചെയ്ത് ചെയ്യും ☐
   സി) സമയം കിട്ടുമ്പോൾ ഞാൻ ചെയ്യും ☐
   ഡി) ഗൃഹപാഠം എനിക്ക് ബുദ്ധിമുട്ടായി തോന്നും ☐

5. മത്സരത്തിൽ തോൽക്കാൻ ഇടയായാൽ നിങ്ങൾ എന്തുചെയ്യും ?

എ) ഒരു കായിക താരത്തിന്റെ ഊർജ്ജസ്വലതയോടെ എടുക്കും ☐
ബി) ഇനിമേൽ ഒന്നിലും പങ്കെടുക്കുകയില്ലെന്ന് തീരുമാനിക്കും ☐
സി) ഞാൻ താഴ്ന്നുപോയതുപോലെ തോന്നും ☐
ഡി) ഞാൻ അതു വകവയ്ക്കില്ല. ☐

6. നിങ്ങളുടെ ജോലിയിലോ, പഠനത്തിലോ മടുപ്പുതോന്നുകയാണെങ്കിൽ നിങ്ങൾ എന്തുചെയ്യും?

എ) ഞാൻ പാട്ട്, കളി, ടെലിവിഷൻ എന്നിവകൊണ്ട് സ്വയം സ്വസ്ഥത നേടും ☐
ബി) ഞാൻ ഉറങ്ങും ☐
സി) ഞാൻ മറ്റുള്ള ജോലികളിൽ തുടരും ☐

7. നിങ്ങളുടെ ജീവിതത്തിൽ എത്ര മാതൃകാ വ്യക്തികളെ നിങ്ങൾ അനുകരിക്കും ?

എ) ഒന്ന് ☐
ബി) രണ്ട് ☐
സി) രണ്ടിലധികം ☐
ഡി) ഒന്നും ഇല്ല ☐

8. നിങ്ങളുടെ തീരുമാനങ്ങളും പ്രവൃത്തികളും എടുക്കുന്നതിന് നിങ്ങളെ പ്രചോദിതരാക്കുന്നതാര് ?

എ) മാതാപിതാക്കൾ ☐
ബി) അദ്ധ്യാപകർ ☐
സി) കൂട്ടുകാർ/സഹപാഠികൾ ☐
ഡി) സ്വന്തമായി ☐
ഇ) ബന്ധുമിത്രാദികൾ ☐

9. നിങ്ങൾ നിങ്ങളെ മറ്റുള്ളവരുമായി എങ്ങനെ താരതമ്യപ്പെടുത്തുന്നു ?

എ) ഞാൻ മറ്റുള്ളവരെക്കാൾ നല്ലതാണ് ☐
ബി) ഞാൻ കൊള്ളരുതാത്തതാണ് ☐
സി) ഞാൻ മറ്റുള്ളവരെപ്പോലെ നല്ലതാണ് ☐

10. നിങ്ങൾ നിങ്ങളുടെ ശാരീരിക മാറ്റങ്ങളെ എങ്ങനെ കൈകാര്യം ചെയ്യും ?

എ) അത് സാധാരണമാണ്, അതുകൊണ്ട് ഞാൻ കൂടുതൽ ശ്രദ്ധിക്കാറില്ല ☐

ബി) അത് പ്രാധാന്യം അർഹിക്കുന്നതാണ്, അതുകൊണ്ട് ഞാൻ മറ്റുള്ളവരുടെ ഉപദേശം അനുസരിച്ച് ചെയ്യും. ☐

സി) അത് പ്രശ്നമാണ്, അതുകൊണ്ട് ഞാൻ ആ പ്രശ്നത്തെ അതിജീവിക്കാൻ ശ്രമിക്കും ☐

11. നിങ്ങളുടെ വളർച്ച, വലിപ്പം എന്നിവയെ നിങ്ങൾ എങ്ങനെ അഭിമുഖീകരിക്കും ?

എ) ഞാൻ വലുതാണ്, ഇതിൽ കൂടുതൽ എനിക്ക് വളരണ്ട ☐

ബി) എന്റെ ശാരീരിക വളർച്ച വയസ്സിന് അനുയോജ്യമാണ്, ഞാൻ സന്തോഷവാനാണ് ☐

സി) ഞാൻ ചെറുതാണ്, എനിക്ക് ഇനിയും വളരണം ☐

12. നിങ്ങളുടെ ആരോഗ്യസ്ഥിതി പൊതുവേ എങ്ങനെയാണ് ?

എ) ഞാൻ ക്ഷീണിതനാണ് ☐

ബി) ഞാൻ ആരോഗ്യവാനാണ് ☐

സി) എനിക്ക് രോഗപ്രതിരോധശേഷിയുണ്ട് ☐

13. നിങ്ങളുടെ കളിക്കൂട്ടുകാരിൽ ഒരാൾ കളിക്കിടയിൽ പ്രശ്നമുണ്ടാക്കിയാൽ നിങ്ങൾ എന്തു ചെയ്യും ?

എ) അവനോ/അവളെ കണിശമായും ശിക്ഷിക്കപ്പെടണം ☐

ബി) അവനോ/അവൾക്കോ താക്കീത് നൽകി വിടണം ☐

സി) അവനോടോ /അവളോടൊ ക്ഷമിക്കണം ☐

14. നിങ്ങളുടെ സഹപാഠികളിൽ ഒരാൾ നിങ്ങളെ കളിപ്പേരു വിളിച്ചാൽ നിങ്ങൾ എന്തുചെയ്യും?

എ) ഞാൻ ദേഷ്യം കാണിക്കും ☐

ബി) ഞാൻ തിരികെ കളിപ്പേര് വിളിക്കും ☐

സി) ഞാൻ കരയും ☐

ഡി) ഞാൻ അത് വക വയ്ക്കില്ല ☐

15. നിങ്ങളുടെ സുഹൃത്ത് നിങ്ങളുടെ പേര് ഒരു ആൺകുട്ടിയുടെയോ, പെൺകുട്ടിയുടേയോ പേര് ചേർത്ത് കളിയാക്കുകയാണെങ്കിൽ എങ്ങനെ പ്രതികരിക്കും ?

എ) ഞാൻ അവരുമായി വഴക്കുണ്ടാക്കും ☐

ബി) ഞാൻ അദ്ധ്യാപകരോട്/രക്ഷകർത്താക്കളോട് പരാതി പറയും ☐

സി) ഞാൻ കരയും ☐

ഡി) ഞാൻ അത് വകവയ്ക്കാറില്ല ☐

16. കർശനമായ അച്ചടക്കം അദ്ധ്യാപകരോ/മാതാപിതാക്കളോ നിർദ്ദേശിക്കുമ്പോൾ നിങ്ങൾ എന്തുചെയ്യും ?

എ) ഞാൻ അത് സ്വീകരിക്കാതെ നിരസിക്കും ☐

ബി) എനിക്ക് നല്ലതെന്ന് തോന്നുന്നത് ചെയ്യാൻ ഞാൻ തീരുമാനിക്കും ☐

സി) ഞാൻ അത് അനുസരിക്കും ☐

17. നിങ്ങളുടെ മാതാപിതാക്കൾ നിങ്ങളുടെ തെറ്റുകൾ തിരുത്തുമ്പോൾ നിങ്ങൾ എന്തുചെയ്യും?

എ) ആ തിരുത്തലുകൾ നല്ല ഉപദേശങ്ങളായി എടുക്കും ☐

ബി) ഞാൻ അത് വകവയ്ക്കില്ല ☐

സി) എനിക്ക് ശരിയെന്ന് തോന്നുന്നത് ഞാൻ ചെയ്യും ☐

18. നിങ്ങളുടെ മാതാവോ, പിതാവോ നിങ്ങളെ മറ്റുള്ളവരുമായി താരതമ്യം ചെയ്യുകയോ വിമർശിക്കുകയോ ചെയ്യുമ്പോൾ നിങ്ങൾ എന്തുചെയ്യും ?

എ) ഞാൻ മാതാപിതാക്കളോട് ദേഷ്യം കാണിക്കും ☐

ബി) എനിക്ക് മറ്റുള്ളവരോട് അസൂയ തോന്നും ☐

സി) ഞാൻ താഴ്ന്നുപോയത് പോലെ തോന്നും ☐

ഡി) നന്നായി ചെയ്യുവാൻ എനിക്ക് പ്രചോദനം ലഭിക്കും ☐

19. ഒരു കൂട്ടായ പ്രവർത്തനമോ, ചുമതലയോ സ്കൂളിൽ ഏൽപ്പിക്കുമ്പോൾ നിങ്ങൾ എന്തുചെയ്യും ?

എ) ഞാൻ സന്തോഷത്തോടെ അതിൽ പ്രവർത്തിക്കും ☐

ബി) ഞാൻ തനിയെ പ്രവൃത്തിക്കും ☐

സി) ഞാൻ മറ്റുള്ളവരുടെ പ്രവൃത്തിയെ സംശയിക്കും ☐

ഡി) ഞാൻ കൂട്ടായ പ്രവൃത്തിയെ നിരസിക്കും ☐

20. നിങ്ങളുടെ അദ്ധ്യാപിക പക്ഷഭേദം കാണിക്കുന്നു എന്ന് തോന്നുമ്പോൾ നിങ്ങൾ എന്തുചെയ്യും ?

എ) ഞാൻ അത് സാധാരണമായെടുക്കും ☐

ബി) ഞാൻ കരയും ☐

സി) ഞാൻ ഒരു വെല്ലുവിളിയായി എടുത്ത് നന്നായി പഠിക്കും ☐

ഡി) ഞാൻ അത് അദ്ധ്യാപികയോട് തുറന്നുപറയും. ☐

APPENDIX - VIII

SCORING KEY

SECTION B

1.
a) 1
b) 1
c) 2

2.
a) 2
b) 1
c) 0

3
a) 3
b) 2
c) 1
d) 0

4
a) 1
b) 2
c) 3
d) 0

1.
a) 1
b) 1
c) 2

2.
a) 2
b) 1
c) 0

3
a) 3
b) 2
c) 1
d) 0

4
a) 1
b) 2
c) 3
d) 0

5
a)
b)
c)
d)

6
a) 1
b) 1
c) 0

7
a) 1
b) 1
c) 1
d) 0

8
a) 1
b) 1
c) 1
d) 1
e) 1

9
a) 1
b) 0
c) 2

10
a) 0
b) 1
c) 0

11
a) 0
b) 1
c) 0

SECTION C

12
a) 0
b) 1
c) 1

13
a) 0
b) 1
c) 1

14
a) 0
b) 0
c) 1
d) 2

15
a) 0
b) 1
c) 1
d) 2

16
a) 0
b) 1
c) 2

17
a) 2
b) 0
c) 1

18
a) 1
b) 1
c) 0
d) 2

19
a) 1
b) 0
c) 0
d) 0

20
a) 1
b) 0
c) 1
d) 1

ABSTRACT

"A study to Assess the Problem Solving Ability of School Children with Active and Non Active Play in selected school of Kollam District, Kerala", as a partial fulfillment of the requirement for the award of the degree of Master of Science in nursing was done by 30083641 from Annai J.K.K Sampoorani Ammal College of Nursing, Komarapalayam affiliated to the Tamilnadu Dr. M.G.R Medical University, March 2010.

The objectives of the study were (1) To assess the problem solving ability among school children. (2) To assess the active play among school children. (3) To determine the association between problem solving ability and active play among school children. (4) To determine the association between problem solving ability and selected factors among school children with active and non active play. (5) To determine the association between active play and the selected factors among school children.

The hypotheses of the study were; H_1) There will be a significant difference in the problem solving ability between school children with active and non active play.H_2)There will be a significant difference in active play among school children.H_3) There will be a significant correlation between problem solving ability and active play among school children.H_4) There will be a significant association between problem solving ability and selected factors among school children with active and non active play.H_5) There will be a significant association between active play and selected factors among school children.

Literature was reviewed under the following headings: (1) Studies related to problem solving ability among school children. (2) Studies related to play among school children. (3) Studies related to problem solving ability and play among school children.

The researcher developed the conceptual framework for the study. The research design used was a descriptive study to be precise, comparative and correlational design. The setting of the study was at S.K.V.V.H.S.S, Thrikkannamangal, in Kollam District, kerala. In this study, the sample size was 350 school children. The sampling technique used was total enumeration or census method.

A structured questionnaire was used to collect data. The reliability of the tool was found to be r=0.92, high.

Pilot study was conducted among 10 school children. The main study was conducted in similar settings. Data were collected by a structured questionnaire. The data gathered were analyzed by descriptive and inferential statistics using SPSS, version 10. The interpretation was based on the objectives of the study.

The finding of the study showed that the mean problem solving ability score among active play children was significantly high t=4.826 (p=.001). The mean play score among active play children was significantly high t=25.261(p=.001). There was a significant association between problem solving ability and location of residence and age among school children.

The study concluded by stating the implications, limitations, recommendations and the need for play among school children